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THE
GENTLEMAN *and* FARMER'S
GUIDE

For the Increase and Improvement of

CATTLE,

VIZ.

LAMBS,
SHEEP,
HOGS,



CALVES,
COWS,
OXEN.

Also the best Manner of Breeding, and Breaking

HORSES,

BOTH FOR

SPORT *and* BURDEN:

WITH

An Account of their respective DISTEMPERS, and
the most approved Medicines for the CURE of them.

ALSO

Some Observations on the many Benefits of the Woollen
Manufactures of *Great-Britain*, and the great
Advantages arising from HIDES, TALLOW, &c.

Illustrated with COPPER PLATES.

The SECOND EDITION.

By R. BRADLEY, Professor of BOTANY in the
Univerfity of *Cambridge*, and F. R. S.

L O N D O N:

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in the Old-Bath. 1732. Price 3s.

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G U I D E

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THE

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TO THE
RIGHT HONOURABLE
THE
Lord *VANE*, &c.

MY LORD,



S your Character
distinguishes *You*
as Happy in the
Possession of those
Virtues, which are the Or-

ii. The DEDICATION.

namement of Great and Noble Personages, and regard the Welfare of your Country; I beg leave to present you with the following Piece, relating to the Improvement of our Nation by Cattle, which make one of the largest Branches of the British Wealth; or, as I may say, is one of the brightest Jewels in the British *Diadem*; no Part of the World, being so famous for their Prudence and Dexterity in the Management of the Woollen Manufacture, as the Nations under the *British* Government. Nor is any Country capable

The DEDICATION. iii.

capable of producing more Beautiful and Useful Horses than are bred with us.

Our Universal Trade proceeding from the Wool of our Sheep, makes us Master of the Products of the whole Earth ; and does no less, make us superiour to all other People in the Strength arising by our Navigation.

IT is, *My Lord*, remarkable, that the *British* Dominions abound in Plenty of every Thing, which constitutes them *superiour to other Kingdoms*. But as our

iv. The DEDICATION.

Riches are not yet so Valuable, but that many Improvements may be made in them: The Patronage of a Nobleman of your Genius, to a Work of this Kind, which I have endeavoured to render universally beneficial, must necessarily promote a Design, which aims at the Good of the People: Which is the Ambition of

MY LORD,

Your Lordship's

Most Devoted

Humble Servant,

R. BRADLEY.



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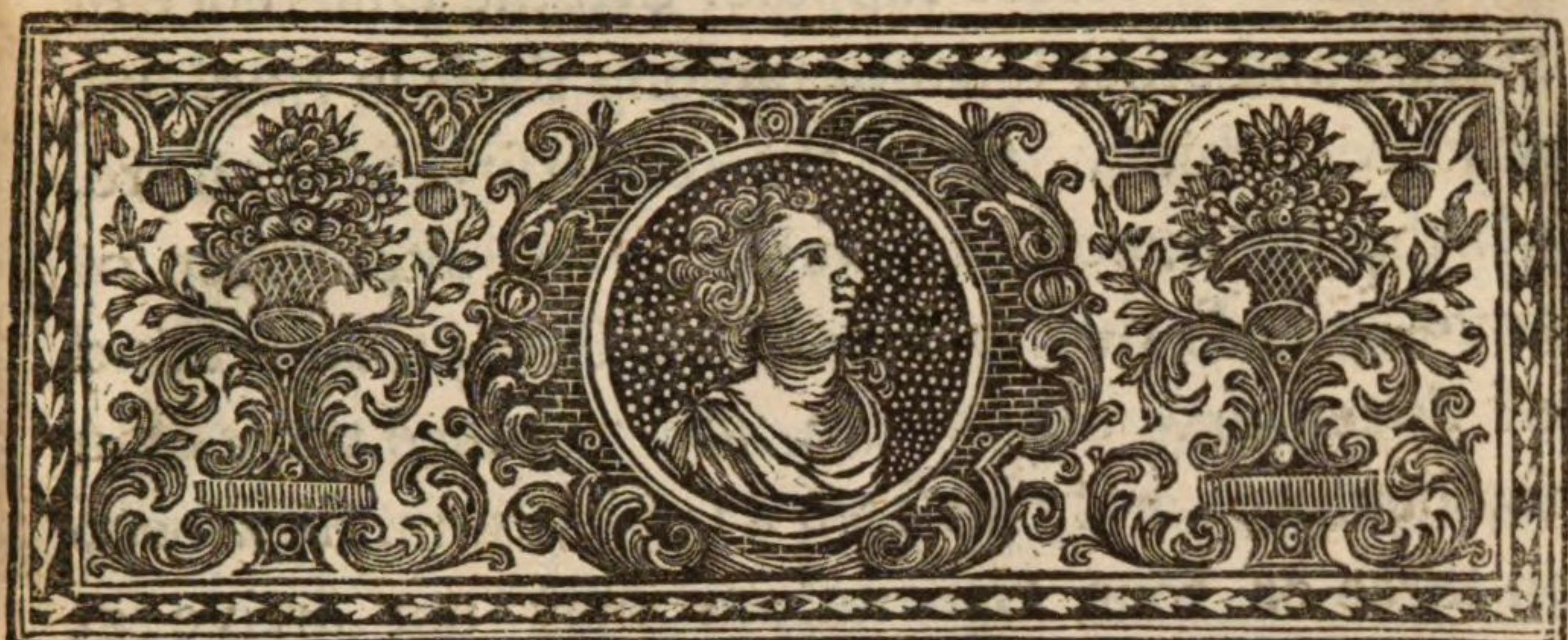
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THE
Gentleman and Farmer's
 GUIDE, &c.

CHAP. I.

*Of Sheep, and the several Ways of Ordering
 them for Profit.*

THE Sheep being a Creature of extraordinary Profit to *Britain*, from the Riches which proceed from its Wool, and the great Convenience arising to the Generality from its nourishing Flesh, its Tallow, and its Skin, I think it proper to give it the Preference in this Treatise.

THOUGH there are many Sorts of Sheep in divers Countries abroad, my Business will be only to treat of the Management of such as are with us ;

and I shall therefore suppose, that the Difference of Stature and other Qualities among those in *England*, proceeds chiefly from the Diversity of Pasture, which, by Experience we find, will alter Sheep of any Kind ; so that in Process of Time, a large Kind of Sheep may degenerate, and produce those of a smaller Size ; and that from a large Strain, the Sheep in three or four Generations may not arrive at more than half the Weight or Bulk of their first Sires ; and on the contrary, Sheep of a small Size may be improved and enlarged by a good Dyet, and a Constancy of it when they are Young, and 'till they are arrived at their natural Period of Growth. This I find by Practice, and agrees well enough with the Philosophy of our late Writers of Credit, who tell us that a Fish if it be well fed from the Time of Hatching from the Spawn, will grow larger in one or two Years, than another that has had a starved Water will do in three or four ; or a Tree in a Ground it likes, will grow as much in four Years, as another of the same Sort will do in a contrary Ground in ten Years. And so I find it is in all Things that live, if we starve them in the Beginning, or give them a slender Dyet, they will never arrive to a large Size or Stature ; but if on the other hand we find them well, they will exceed the Strain they were derived from in Stature. It is very obvious in the Case of Sheep, that the same Sort will grow more in one Pasture than another ; and as that happens to be, so they will sell for more or less Money in the Markets, where the largest Size and the fattest Sheep will always

always fetch the most Money ; notwithstanding that, the smaller Sheep have the most agreeable Flesh and the finest Wool. Now as the large Sheep seem to derive their extraordinary Bulk from rich Pasture, so they are generally esteemed to yield a more nourishing Flesh, than those of the smaller Sort ; however, as their Flesh is of a coarser Grain than the Flesh of the small Sheep, so it is more proper for People of strong Stomachs that labour much, or use much Exercise. And as their Bodies are large, and the Grain of their Flesh in proportion, so is their Wool more gross and attended with coarse bristley Hairs, than we find in the smaller Kind ; and these Differences seem chiefly, as I have hinted above, to proceed from the Difference of Pastures wherein Sheep are fed. What are commonly call'd long shankt, or long jointed, may with good Reason be said to differ from the short Jointed only, by the means before mention'd. And by way of Confirmation of what has been said on this Occasion, let us consider the vast Improvements that have been made by buying small Sheep in one Country where the Grass is fine, and feeding them in another, where the Grass is strong and deep. A Case almost parallel with this is, that of the Rabbet ; for there we are sure we have but one Sort natural to *England* ; the silver haired is a Foreigner, and a Curiosity carefully kept from mixing with the common Sort. However, we find the Rabbets of most Warrens in *England*, to differ from one another in Length of Joints, in Size of Body, and in Fineness of Hair. The Rabbets of *Auborne*

Chase in Wiltshire, and of a Warren or two in *Norfolk*, excel for their Fineness of Flesh, Fineness of Hair, and extraordinary Fatness, though they are short jointed, and much smaller than others; which seems to be occasioned entirely by the short and dry Food they meet in those Places. We are sure Rabbits cannot grow large, unless they feed in strong Grounds; and then their Flesh is meagre, and they are subject to the Rot as well as Sheep; and though they grow larger, or bring a larger Brood by being turned into those Pastures which we call rich, yet their Flesh, their Hair, &c. will not be fine, as in the short Pasture, just as Sheep are.

WE may next consider, that Soils in their several Variations, as they add more or less to the Bulk of the Plants that grow on them; so the Cattle or Creatures that feed upon such Produce, will partake more or less of the Quality of such Pasture. If it be such as the Cattle can eat plentifully, and at their own Will, then, if they can go through it without Distemper they thrive; but it is hazardous to venture Sheep from a small Bite to rich Pasture too suddenly, for that often brings the mortal Distemper which is called the *Red Water*. Rabbits likewise are endangered by being brought from a dry Food to one of a moister Kind; and we may observe, that both the Sheep and the Rabbits are endangered by Wet.

It is remarkable, that when the Soil is chalky, as on many Parts of *Salisbury-Plain*, and about *Dorchester*,

Dorchester, the Grass is so short, that one would hardly imagine a Sheep could bite at it ; and yet those Sheep yield a fine Flesh, an extraordinary fine Wool, and are never subject to the Rot. So in the famous *Auborne* Warren, the Soil is chalky, and the Grass extremely short ; the Rabbits there, are never distempered with what is commonly called the *Pot-belly* or *Rot*, and the Sheep thereabouts, which feed upon the same Kind of Pasture, are constantly healthful. So I judge, that the shorter the Food, and the dryer the Ground, for Sheep or Rabbits, as it is in this Case, so will your Flocks be more secure from dangerous Distempers ; but being introduced by degrees into richer Pasture, and at proper Seasons, will enlarge their Bulk.

It is thought adviseable by the Farmers that buy Sheep from the poor Lands, and feed them for the Market in those of a richer Kind, and even to breed them upon rich Soils to enlarge them ; for which Reason, we have many Fairs in *England* for live Cattle. The People of one County will buy from another, and sell the same Sheep alive into another, after feeding them a few Months upon a deeper Grass than where they were first bred, to a richer, than where they were fed last ; and the third Pasture may yet prepare them for a fourth, till they are improved as much as they can be, and then are sent to the *Butcher*.

But to say more of the Feed of Sheep ; where the Grass is short, as I have mentioned above, and the

Ground is subject to Overflowing of Waters, there Sheep will be endangered in their Health, and such is the Case of such Sheep as are fed upon Commons that are incommoded by Bogs: Although the Ground happens to be sandy, yet if it is subject to Wet, Sheep will not live safely upon such Lands, unless they are put there when the weather is fair; for where Lands are subject to Overflowings, the Grass however small, or great it is, will be full of Grit or Sand; and if Sheep come into such Pasture soon after the Waters are retreated, they will surely have the Rott. This is certain from Experience, but is not enough known, to prevent the Mischief every where. Therefore let every Farmer keep his Sheep from such Grass as is made gritty by Waters, and in the Course of their feeding, keep them upon the highest and driest Land in wet Seasons, and allow them only the low rich Lands at the dry Time of the Year, if you have a mind to keep your Flock Sound.

BUT I shall speak no more of Food for Sheep at present, but set down the sure Marks of Rotteness in Sheep, and the Characters by which one may distinguish those of the best Kind for Encrease.

SECT. I. *Concerning Rotten Sheep, and the several Ways of Knowing them.*

EXAMINE first the Eye, for that is a good Index; if the Sheep be sound, you will find the fibres about the white of the Eye, of a bright

bright Red, and the Eye full and clear; but if the Eye happens to be hollow, and of an ordinary tallow Colour, and the blood Vessels look of a darkish Red tending towards Black, the Sheep is then certainly rotten.

II. O P E N the Wool on the Side towards the Breast, and if the Flesh looks red, or of a ruddy Colour, and is dry, then one may judge it sound, but if it is Pale and the Skin moist, then it is surely rotten.

III. I F you open the Wool on the Side and rub it between your Fingers, and then pull a little of it gently, it will easily leave the Skin if the Sheep be rotten; but if it be sound, it will hold close to the side.

IV. T H E I R Teeth will appear discoloured, and their Gums declining if they are rotten; but if they are sound the Gums will be firm, and the Teeth of a fair Colour.

T H E S E are the Marks whereby rotten Sheep may be known when they are brought alive to the Market; but when they have past the Hands of the *Butcher*, then the following are sure Proofs of Rottenness.

I. W H E N a Sheep is killed and you find his Belly full of Water, it is surely rotten.

II. IF the Fat of the Sheep be yellow, it is a Sign of Rottenness.

III. IF we cut or open the Liver soon after killing a Sheep, and we find in it small Worms of the Shape of Flounders, that Sheep is rotten.

IV. IF the Liver is full of Knotts, or white Blisters, the Sheep is rotten.

V. IF the Liver of a Sheep will break in pieces with the Hands, it is rotten, but if it hold together it is sound.

THESE are the Marks whereby one may know rotten Sheep; and while I am speaking of this Case, I must observe, that wherever the Speerwort or (to be sure of the Name) the Flamula grows, which for the most part is found in wet Grounds, there the Sheep rott. An old Author of credit, bids us never turn our Sheep into such Pasture; for, as he justly observes, a single leaf of the Flamula will raise a Blister, if it is applyed to the naked Skin. This Flamula is a Ranunculus or Crow-foot, as *Perkinson's* Herbal describes it, and always grows in wet Places. So likewise the Pennywort or Nummularia is poisonous to Sheep, or at least these Plants indicate a bad Pasture; for whether Sheep eat of these Plants or not, the Places where they grow, are always too moist for Sheep; for I have never seen them in any Grounds but such as have been subject to Waters; but it is likely

likely that Sheep will feed upon them, and then they must surely be endangered.

It is also dangerous to turn Sheep out of a Fold, while there is any Mildew upon the Grafs; for many Sheep have been lost by feeding upon such Grafs. Let the Sun first shine an Hour or two upon it. But to know when the Mildew is upon the Grafs, examine the Leaves of some Neighbouring Trees, and if the Mildew is there, by the applying a Leafe to the Tongue, it will yield a Sweetness to the Taste. I am informed by the Learned, that this Mildew is attended with very small Insects that are poisonous. We may likewise suspect a Mildew in Mornings when we perceive a white Hoar and Cobwebs upon the Grafs, which commonly happens about the Beginning of *August*. The Webs are made by a very small Venemous Insect like a Spider, which retreats when the Sun comes to shine with any Warmth in the Morning: these small Spiders make their Webbs after Sun-set if the weather be dry, but never work in wet Weather. It is also dangerous to let Sheep feed upon Fallows, where the Land is light; for in such Soyles they frequently pull up the Herb they feed upon by the Root, and eat Root and all, with the Dirt that rises with it, which unavoidably will give them the Rot; but if the Fallows were in strong Land, and there should not happen to be Grafs sufficient for them, their Hunger would force them to eat unwholsome Herbs, and so they would become distempered with what the Skilfull call the Hunger-

Hunger-rot, which is the worst of all; for then neither the Skin nor the Flesh will yield any profit. As for Pasture Sheep, they seldom rot but by Mildew, and when that happens, the Skin and Tallow will be worth something, as they have had no Lack of Food. In some Pastures there are great Numbers of white Snails and Sluggs, which while they are small, the Sheep take in with the Grass, and are distempered by them. The Snails and Slugs breed about *April* and *August*, or *September*; so that at the Times when they are smallest, the Sheep are in most Danger from them. They breed for the most part in damp and shady Grounds, and retire from their Feed (upon the Grass or other Herbs) to their Places of Shelter, about nine or ten in the Morning if the Sun shine strong; but in wet Weather they remain upon the Grass constantly, so that Sheep should not be turned into such Pastures, but in fair Weather, or after the Dew is off of the Grass; for when there is no Dew or other Wet upon the Grass, the Snail or Slug cannot feed, and therefore is never abroad in the dry Part of the Day; so that in dry Weather, Sheep are not in danger of the Rot by these Creatures.

THE Pelt or Pellet Rot, is occasioned, as is supposed by great Wet only: it happens for the most part in Woody Countries, where the Sheep have too much Shade, with a moist Air, and cannot have Opportunity of drying themselves.

THUS

T H U S we may find it necessary to buy Sheep out of the dryest Soils, and from such Places as are not incommoded too much by Waters, or evil Plants; and especially from the poorer Lands: for we must observe, as I have mentioned before, that no Cattle will thrive that come from a rich Ground into a poorer Soil, which I cannot help repeating, because I have known several who have been great Losers by buying of Cattle that have been bred upon rich Lands, and have afterwards been brought to worse. Some young Husbandmen not acquainted with this Rule, have bought young Oxen at five Pound a-piece, and after two or three Months Feed, have sold them at three Pounds a-piece, and yet they thought themselves very understanding in the Business; and some Sheep that have been bought at ten and twelve pounds *per* Score, have proved forty or fifty Shillings *per* Score Loss to the Buyer, and sometimes more than half Loss for want of such Knowledge. but there is a Kind of political Knowledge required in the buying and selling of Cattle, which sly and cunning People best know, when and how to use, for which Reason a Book of this Kind may prove the more useful, as it will shew every one how to know good from bad Cattle, and instruct them in their Management of them.

T H O U G H we have large and small Sheep in *England*, yet as we have observed already, the large and small Sheep seem to come from one Stock, and only differ by being bred and fed in different Pastures; so that when we go to Market, the surest Way to be

be wise in our Purchase, if we buy them to improve, after we have examined whether they are sound, is to choose the Ewes not above two Years old, for that is their best Age to bring strong and sound Lambs; though I have seen those of a Year old, which we call Hogs, or Hoggets, bring Lambs, but it is judged they become Weak by it, and are not so capable of Improvement as those of two Years, by taking the Ram so early. And after three Years old I would not advise any one to buy them: we may know them to be old if their Teeth are worn. The Ewe in this Choice should be full bodied, deep stapled, and the Wooll thick and curled on the upper Parts of the Body, especially the Neck and the Head; the Belly should be well covered, for where good Wooll is wanting in these Places, 'tis so bad a Sign that no Husbandmen of Judgement will buy them. The Neck should be long, and the Legs short; for they will feed the better and see better how to distinguish their Food: You may always know the Sheep that are trained upon the Marsh Lands by being long boned, or long joynted; whenever they are brought to Market they are fit for the Butcher only.

IN the Purchase of Sheep for Breeding, it has been the Opinion of some that those of the Ewes, which have the smallest Horns, or none at all, are the best; because as they suppose the Lambs are brought forth with less Trouble to the Ewe; but that is a Mistake, for the Lambs have not Horns when they are yeaned; this the Farmers know, but
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it is however necessary to take Notice of it in a Work of this Nature ; because some Persons who are at present unacquainted with this Sort of Husbandry, may in Time have Opportunities of practising it, and may then know how to talk with the Learned. Those Sheep that have no Horns are called Pollards, or polled Sheep.

THE Ram is counted best, in cold bleak Countries, that has his Horns large and turning inward ; for the Generality of Farmers imagine, that the Largeness of the Horns serves to shelter their Heads from the Violence of the Cold : but however that may be ; it seems probable, that the Largeness of the Horns in these Creatures denotes an extraordinary Strength in them, and for that Reason they are more capable of resisting the Cold and Hardships of the most violent Weather, and which attend Places which are much exposed to the sharper and tempestuous Winds ; but in calmer and more serene Situations, the polled or pollard Sheep, whether Ewe or Ram, are known to prosper very well. It is objected against the Ram with great Horns, that as he knows himself to be well armed he is mischievous, and will be always fighting when the polled Rams are mild and quiet ; but as I observed above, that the Largeness of the Horns seems to denote Strength, so I suppose it is their extraordinary Vigour that makes them wanton : It appears however, that the Sheep with large Horns are less subject to Distempers than the pollard Sheep ; their Horns perhaps taking from their Bodies any too great Share

Share of Moisture which they may receive from rank Grass, or wet Grounds.

IT is observable, that some Sheep have their Horns growing rather upright than curling; all such I esteem to be a cross Strain between the Goat and our common Sheep; where you see these, they may perhaps be a more hardy Strain than the others; but their Fleece is always coarse, little curled, thin and full of bristly Hairs. So that as a Sheep of a deep and fine Staple is to be coveted, those with upright Horns are not to be desired.

BUT to set forth the good Properties of the Ram; his Eyes must be full and ruddy, his Ears large, his Shoulders, Breast and Haunches broad, his Testicles large, and his Tail broad and long; and his Fleece, as well as that of the Ewe, white, deep, greasy, and close. As for black Sheep they are not to be chosen for two Reasons; in the first Place their Flesh is coarse, and ill tasted, and their Wool, though it is Black, will change red and of an ugly Colour when it is wrought, and comes to be exposed to the Air after it is woven; and there is no way of dying it of any other Colour without more Expence than 'tis worth, and even then no Colour will hold; so that when we buy Sheep, though they appear to be no Mark or Sign of black Wooll about them, yet be careful to examine their Mouths, and if their Chaps, or Tongues, happen to be any ways mottled with black, the Rams especially, do not buy them; for by Degrees they

they will bring you a mottled Race, or perhaps many black Sheep: The Inside of their Chaps, or Lips should be red.

SOME Shepherds are so nice, that they have a Regard to the Lear, or Colour of the Earth, from whence the Sheep are brought; for they imagine that various Sorts of Lands, as they differ in Colour from one another, affect the Wool of the Sheep: Some will make the Fleece better coloured than another, if the Sheep lye upon a red Soil, others upon a Chalk, others upon a grey Soil; but the sound and wholesome food is the Business, as I have intimated before; and where Sheep have that Advantage, the Wool will be well coloured; and then we are to consider that all this Wool before it is brought to use, must be well cleaned and brought to the utmost Whiteness that possibly it can be; so that such Soils as most contribute to discolour it whilst it is in the Fleece, will occasion the most Trouble to the Washer and Comber; but what they seem all to mean by it, is to keep your Sheep upon such Lands as are not incommoded with Dirt, which in other Words, is only recommending a dry Country for Sheep.

IT is becoming the Prudence of every Farmer, when he buys Sheep, to take Care that he does not over stock his Grounds; for having too many, some of the Weakest will starve, or the whole Flock suffer for want of sufficient Grass, and then they fall to eating poisonous Weeds, and perish by the Distemper

Distemper call'd the *Hunger-Rot*. Neither should he keep fewer Sheep than his Lands will feed, for the Food of Sheep and Profit by them is very considerable; and every Sheep wanting, where there is Food for it, is so much Loss to the Farmer. But suppose we are once well stocked with Sheep, it is necessary to examine the Flock once or twice a Year, and when the Winter or bad Weather has carryed off any Sheep, to renew them from sound Flocks, and as nearly of the Size and Goodness of our own, as we can judge; for those which are nearest alike, thrive and encrease best together. So likewise take care to discharge your self of such Sheep as do not appear to prosper in your Grounds; for to keep Sheep longer upon any Land than they can encrease their Flesh or Tallow, is unprofitable; sell such, and the Money which comes by the Unthriving and Unprofitable, will always buy good Sheep; and, by the way, an unprofitable Sheep eats and spoils as much Grass or other Provender as a good Sheep, and into the bargain, may sometimes infect the whole Flock; so that once more I advertise that a Farmer should keep his Flock free from them. Once or twice a Year, I advise the Master of a Farm therefore to make his general Muster; but his Shepherd must be watchful over them constantly, lest any Distemper attack them; for some Distempers which Sheep are subject to, will carry them off in a few Minutes, as I shall have occasion to mention by and by.

BUT

BUT I shall now mention such Observations as are necessary to be known, with Regard to the Breeding of Sheep, which is one of the main Articles relating to Sheep-keeping, considering that the Strength of the Flock will depend in great measure upon the good Qualities of the Sire and Dam, and the Seasons that they are brought to blossom in. Among some old written Receipts to bring Sheep to blossom as we now call it, I find the Word which we call Blossom, written Blysome, or Blythsome, which seems to denote that it means bringing Sheep to Lust; however, we know, that at present it signifies as much; and there are several Ways of doing this, as I shall mention hereafter.

THE Ages for breeding, both of the Ram and the Ewe, are, by some, judged to be in the second and third Year of the Ewe the best, because then she is supposed to be in the greatest Strength, and the Ram from four or five to seven Years old: But our common People have little Regard to this, for as soon as the Ewe, though she is but a Year old, which we call a Hog or Hogget, will be blysome, they let her go to Rut, or take the Leap of the Ram, although it may be he is not much older than herself; but the Lambs from such are generally weakly, and the Ewe too loses her Strength; and likewise it is common enough to let the Ewes and the Rams run together, and breed from the first Year to the ninth, without any Regard to their respective Ages. But if the Shepherd has Regard

to the Coupling of the Rams with the Ewes, when they are all suffer'd to go in one Flock ; to prevent the Rutting of the Young or other Rams with the Ewes that are too young, he will tie twisted Rushes, Bits of Leather, or somewhat of these Sorts to the Tails of the Ewes he would prevent from Breeding ; which Method will put by the Ram from his Intent. But it is much better to keep the Rams separate from the Ewes in different Pastures, 'till such Time as we design to bring them to the Rutt ; and about a Month or Six Weeks before we would have them to couple, let them have better Pasture than ordinary, which will dispose the Ewe to blossom, or prepare her to take the Ram. It is with Sheep, as it is with the Cow, and other Cattle ; the Female must be in a certain State desirous of the Male, before the Male will attempt to serve her ; and this is evidently brought about by encreasing the Richness of their Food some time before we would have them couple ; for Richness of Food encreases the Vigour of the Body.

SOME Time ago, Lamb was a Rarity at *Christmas* ; but now, unless it be two Months in the Year, some of our Farmers have got the Knack of bringing their Sheep to blossom every Month. Upon the first setting forward in this Way, House Lamb was brought to Market in *November* or *December*. A little above Twenty Years ago, the Lambs alive were sold at Thirty Shillings, or a Guinea a-piece, delivered at *London* ; and Sir *John D'Oyley*, a very curious Gentleman of *Oxfordshire*,

my

my Friend, used to make considerable Advantage by them, by sending several Hundreds of Lambs in a Year to Market in the Winter Season: so good a Judge was he of the Improvement of his Estate. The Method that was taken at first of doing this, depended chiefly upon the affording the Sheep in different Pastures, and the Richest, or what produced the most nourishing Food, would bring the Sheep to blossom sooner than the others; so as that they must consequently bring Lambs agreeable to the Times of their coming to Rutt, it was only necessary to observe what Pastures afforded the richest Food at the different Seasons of the Year, or to give such Provender to the Sheep a little before we would bring them to blossom, as might make them produce Lambs at the Times we design. And for this End, we must have Pastures of different Kinds, some of higher Food than others; but chiefly the high Lands, short in Grass, should be in Plenty for common Food, where the Ewes generally should run; but the Rams never: They should only be put to the Ewes that are set a-part in Pastures for different Seasons of Breeding; and thereby the Rams will always be in good Heart, and by accompanying them in the same Pastures, will more naturally engage the Ewes to blossom.

THERE are two Months in the Year which are either too dry or too wet, to encourage those Creatures to go to Rutt; but they are uncertain: Our Almanack-makers are not lately sure of the Weather, or mistake, or — but that we may

not depend upon such Trifles; what I mean by the too dry Month, is, when the Grass upon the High-Lands is burnt up so much, that Sheep have not a Bite, or enough to subsist them; then put them into such Pasture as may supply them plentifully with Nourishment. Knott Grass is thought good, and the Blades of Onions, by some People, and the Leaves of Turnips, if there are any; or if the Month happens to give us a larger Quantity of Wet than ordinary, then give them Oats, and good dry and short Hay, rubbing their Teeth before-hand with a little Bay-salt and Water, if there is any Danger, by great Wetts, of a Rott: But if their Gums or Teeth are in good order, according to what I have mentioned above, do not use the Salt and Water, but let them have Plenty of Food, and keep their Fleece dry; feeding at the same time the Ewes and Rams together, giving them their Oats in Troughs lying near the Ground, and their Hay upon the Ground in a dry Place; for they cannot feed in a Natural Way, if they were to feed with their Heads up, to draw their Meat from a Rack. If during this way of Feeding, there happens to be a fair Hour or two in the Day, let them graze upon the shortest Grass and best exposed Grounds, and return them to a warm Sheep-coat, or repose them under good Shelter in the Night. But when Sheep have dry Food, they must have Water by them. And in dangerous wet Seasons, when they are in this dry way of Feeding, put about an Ounce of Bay-Salt into three Gallons of Water, and it will help them, as
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the Salt Marshes are used to help other Cattle. When I come to speak of the Cures in the several Distempers of Sheep, I shall have occasion to explain this further.

IN these select Cases, where Sheep are to be put together purely upon the Account of forcing them to couple; the elder Ewes should be appointed, and the Rams of three or four Years old: For the elder Ewes come more easily to blossom than the very Young, and the Rams of the Age I mention, being acquainted with the Rutt, rather chuse the old Ewes than the Young, because they are the more easily entreated; as some Farmers of good Credit affirm, and as myself have often observed. There are some Drugs may be given to Sheep to force them to couple, besides the Herbs I have mentioned; but they weaken the Sheep when the forcing is over, and therefore I hold them unprofitable.

I have yet a few Remarks to make, with Regard to the putting the Rams to the Ewes in Farms of different Situations, and which are differently managed; I mean, that they may not be forced, but be brought to the Rutt by the most natural Means.

IF a Farmer has good Winter Pasture for Sheep, and that springs early in the Year, he may let his Rams and Ewes run together all the Year about to rutt when they will; but if the Pasture be only Grass in Common, then the best Time to put the Rams to the Ewes, is, when Deer generally go to

the Rutt, that is, about *July*; and if the Farmer has only a Run of Sheep upon a common Field, amongst the Arables, then 'tis Time enough about *Michaelmas*. Again we may observe, that in such Countries as are mountainous and rocky, which have no Pastures, or common Fields, but heathy Ground only, 'twill be Time enough to bring the Rams and Ewes together about *St. Simon* and *St. Jude's Day*, which is towards the End of *October*. The Reason of this, is, that the Ewes go with Young twenty Weeks, or as one may say, yeans or brings forth her Lamb in the twentieth Week; so it is necessary the Ewe at yeaning, should have the Benefit of fresh or springing Grass, for that will afford her plenty of Milk for the Improvement of her Lamb, or Lambs; for some Ewes will bring Two, Three, or Four at a Time; and where good nourishing Food is wanting at yeaning Time, many Lambs are lost; so that we should always take Care to be apprized of the Qualities of our Lands, and the State of them at different Seasons, that we may the better contrive the Security of our young Flock, and bring our Sheep to the Blossom at such Times as may agree with the Seasons our Pastures may be in the best Order to receive the Lambs when they are dropped. This in a great Measure depends upon the good Contrivance of the Farmer, who best knows the State of his Lands, and when they will yeild fresh Grass; for if a Ewe wants Milk at yeaning Time, which seldom or never happens, but when she has not sufficient Food, she will forsake her Lamb,

Lamb, and through her Weakness lose her own Life as well as her Lamb's.

It is good likewise to have Regard to the Time of turning the Rams to the Ewes ; because when Farmers have the Use of Fallow Fields to turn in their Sheep about *May*, then, if the Lambs are not strong, the Balks, Water Furrows, and other Inequalities of the Grounds, incommode them ; so that in such a Case it is best to have the Lambs fall in the Winter, *i. e.* about *December*, *January*, or *February*. What I now speak of relates to Lambs for Breed ; and as the Sheep is the best cloathed at it's Birth of any Creature ; so the Winter Lambs will not be so apt to suffer, though they are yeaned in the hardest Weather. But that they may be more secure, in case of Necessity, the Dams and Lambs too are taken sometimes into the House, but especially when the Lambs are designed to be suckled or fed for the Market, to kill while they are small. The more hardy a Sheep is bred up for the Pasture the better, taking Care that it does not want Provision in the first Part of it's Life. The Method of feeding Lambs in the House I shall treat of in such a manner as is used by the most ingenious Farmers in the Countries, near *London*, where House Lamb brings the best Profit : As it is certain the Flesh of an housed Lamb is much more delightful to nice Palates, than that of grass Lamb ; so where Luxury prevails the most, such Dainties will fetch the most Money.

An excellent Farmer in this Way, near *Kingston* in *Surrey*, trains up his House-Lambs in the following Manner.

Of Suckling Lambs in the House.

CONSIDERING the great Profit which arises of suckling or fattening of Lambs in the House, it will be necessary to say something of it in this Place. It is to be remarked, that there are four Expressions commonly used among the Shepherds, which are not known elsewhere; as for Example, when a Lamb is said to be *tod-bellyed*, it is clinged up; and *twin Bastard-Lambs* are such as are suckled by other Ewes, after having lost their own Lambs. *Bastard-Ewes* are such as suckle the Lambs of other Ewes, or have lost their own. *Sucking at Head* is when a Lamb sucks the first of the Milk.

THE following Letter, which I received from a Person of Quality, well skilled in these Affairs, will inform us of the best Method of fattening Lambs in the House.

To Mr. RICHARD BRADLEY, &c.

S I R,

I HAVE for many Years been curious in the several Branches of Farming, but more particularly in the breeding and feeding of Cattle.

AND

‘ AND observing that you have hitherto treated
 ‘ but little on that Head, I guess you’ll excuse this
 ‘ Trouble, it being on a Subject which I my self
 ‘ have often practised with good Success, as well as
 ‘ Sir *John Dowley* of *Oxfordshire*, and several
 ‘ others.

‘ IN the Education of Lambs in the House,
 ‘ we must contrive a warm Place for them, divided
 ‘ into Stalls, that the Lambs may be more conve-
 ‘ niently suckled; observing likewise, that there
 ‘ are not too many put into the House at one
 ‘ Time; for in such Case, they will become sett,
 ‘ or tot-belly’d.

‘ IF we have many Lambs to suckle, we must
 ‘ mark them, to know which has been longest suck-
 ‘ ing, and the Bastard-Ewes; and those must con-
 ‘ tinue to suck at Head.

‘ CARE must likewise be taken, that what Milk
 ‘ the younger Lambs leave, (if any) be sucked by
 ‘ the older Lambs.

‘ IF you have any Bastard-Ewes, suckle the eldest
 ‘ Lambs on them, beginning about seven in the Mor-
 ‘ ning for the first Part of the Day, and at four in
 ‘ the Afternoon for the second Meal. Likewise
 ‘ observe, that if the Bastard-Ewes have Milk
 ‘ enough to suckle all your Lambs at these Meals,
 ‘ then put the Lambs in only at Noon, and be-
 tween

‘ tween nine and ten at Night, and out again about
 ‘ nine in the Morning.

‘ LET the Tails and Udders of the Ewes be
 ‘ carefully clipt from the Wool, to keep them
 ‘ clean from Dirt, which they are too apt to ga-
 ‘ ther in the House.

‘ IF you have any Twin-Lambs or Dambs that
 ‘ give little Milk, help them on the Bastard-Ewes.
 ‘ When those Lambs which suck at Head on the
 ‘ Bastard-Ewes, have had their Meal, let the
 ‘ others which you design to suck next at Head,
 ‘ clean those Ewes of their Milk. The best Food
 ‘ for Lambs, is Flower, Wheat, or white Pease,
 ‘ in Troughs, and Wheat-Straw, or sometimes fine
 ‘ Hay in Racks. But Straw will make the Flesh of
 ‘ a better Colour. Which is all that occurs, from,

S I R,

Your humble Servant.

A GOOD Shepherd is very much wanting about
 the Season when the Ewes drop the Lambs ; for
 sometimes they have need of Help ; and especially
 if Ravens or Carrion-Crows frequent, or should by
 Accident fly over a pregnant Ewe when she is
 about yeaning : For if a Shepherd is not then pre-
 sent, and either of these ravenous Birds should be
 within sight, they would presently assault the
 Lambs, even before they were quite fallen, and
 pick

pick out their Eyes. And though the Ewes are sensible of it, and endeavour to drive them off by turning their Heads sometimes against them ; yet unless the Ewe is very strong, and can at that difficult Time reach them, or move her self into some other Posture, they will not leave their Prey till they have done the Mischief they designed. When a Ewe is great with two or three Lambs, she then is in most Danger of losing them by these Birds, being less able to defend them. I have been Eye-witness of this Misfortune happening to the yearning Ewes, without being near enough to prevent it in Time ; and I doubt not but all who use the Country, have some time or other observed it. Nor are these voracious Birds less mischievous to Poultry ; they destroy young Chickens, young Ducks, and every young Fowl they can meet with. Therefore a Farmer who has any Sheep, especially in Pastures where Shepherds are not attending, or Poultry about his House, let him shoot those Devourers whenever he can, and reward those Boys that destroy their Nests.

GREAT Thunders are apt to make Ewes cast their Lambs, if any of them should happen to be singly abroad ; and I may say likewise, that a Sheep will never feed well, or prosper, unless it is among the Flock, but more especially if it feeds in its own natural Flock, it will thrive the better.

It is necessary, as soon as the Lamb is fallen, or dropt, to examine whether it be strong as it ought ;
for

for if it is not, it should be housed with the Dam. Some advise upon the first Falling of a Lamb, to raise it upon its Legs, and bring it to the Udder of the Dam, and if it will not then suck, to milk into its Mouth. But Experience teaches that it is not necessary, unless it be very weak indeed, and the Ewe weak likewise, and then both will want equal Help; the Ewe first to be put to good wholesome and nourishing Food, and that will give Milk for the Lamb; or else, if the Ewe should be past Help, put the Lamb to suckle of another Ewe, and if he refuse it, anoint his Lips with Hogs Lard beaten up with a little Milk, or with fresh Butter, which last, is the better of the two: But try him first by milking into his Mouth from the Ewe you design should take care of him.

The proper Time of Gelding Lambs for Wedders or Weathers.

AS we have treated of the Ram and the Ewe as far as it is necessary to bring them to the Produce of the Lamb, it is next my Business to speak of the Wedder or Weather, or Gelt-Sheep: For these will be larger than those which are not castrated, and will endure more Wet, without rotting, than the other Sheep of either Sex. The Ewes are more subject to rot than the Rams, unless it is when they suckle Lambs, according to the old Proverb, that Ewes will not then get the Rot. But in common Cases, I refer to the first Part of this Chapter, where I speak of the proper Food
for

for Sheep. It is held the best Practice, to geld the Lambs for *Weathers*, while they are under the Dam ; that is, early after they are yeaned ; for the Wound is more easily healed, while they are very young, than when they grow more game-some : But several Shepherds have several Minds. I have known some leave them till they have been four or five Months old ; but that is dangerous in my Opinion : And when I say under the Dam, I don't mean till they have got a little Strength. However, to pass this over ; every Shepherd, according to the Country he has been bred in, follows the Method of that Country in this Point, and knows how to do well in this Particular. But I must for the Sake of going forward with my Memorandums relating to the *Weather*, mention this, and also that the *Weather Sheep* turn to great Profit, where there is a good Winter Pasture for them, and the Farmer has Discretion enough to make them fat against the Spring of the Year ; for it is at that Season they come to the best Market, the Ewes then being, for the most part, either suckling of Lambs, or pregnant, and therefore unfit for the Markets ; and the Rams are by no Means fit for the *Butcher* at any time. If you have good Winter Pasture, buy in *Weathers* about *October*, and they will be fat by *February*, which is the Time to carry them to Market.

*Of the Milk of Ewes, and the proper Times
for Weaning of Lambs.*

THE Milk of Ewes is used in many Parts of *England*, but especially in *Wales*, on many Accounts. It is very rich by it self, but has the Taste of Tallow when it is fresh taken from the Ewe; but boiling of it discharges that ill Taste, and it then eats like Cream. It proves of good Service in making of Cheese, if it be mixt with Cows Milk, performing every thing one might expect from pure Cream of the Cows Milk. But it is ill Husbandry to milk the Ewes, if they can have Lambs to run by their Side; for a good Lamb is much more profitable than the Milk; and besides, it hurts the Wool of the Ewes, and keeps them from the Blossom.

IN some Cases, indeed, it may be a Means of Advantage, by retarding them from Blossom till we think proper, in order to bring Lambs at an uncommon Season, or at the Time we desire. If we wean the Lambs too soon, they will be weak, and pine for the Loss of the Dams, and then the Dams will have a better Fleece, and go sooner to the Blossom or Rut. But it is most common, and I think best, unless upon particular Occasions, that, if the Pasture be good, the Rams run continually with the Ewes, and then the Ewes will wean the Lambs themselves, as all good Shepherds know. If we wean a Lamb too soon, it will be
in

in Danger of the Rott; it is discreet then, to carry the Lamb to the *Butcher*; but if a Farmer has *Severals*, or second Pasture, it will be profitable to turn the Lambs, if he has a Mind to wean them, into such Pastures out of the hearing of their Dams, and let many of them go together. One great Regard must be had to Ewes while they suckle Lambs, that the Ewes do not want Food; for if they do, the Lambs will rot, or be in Danger of it.

WHEN a Lamb is to be kept for Breed in a good Common Pasture, one may wean it at about sixteen Weeks old, to make it strong, and the Ewe will have Strength, and go to Blossom quickly; and when Sheep are upon a poor Pasture, as in the mountainous rocky Countries, then the People generally wean their Lambs at about twelve Weeks old, and milk them five or six Weeks; but the Lambs are never so strong as those which are suckled the full Time that the Ewes will suffer them. This Remark I put in, because I had it from a Gentleman who has good Experience this Way, though it relates to an Observation that I have made before. And from the same worthy Person, give me Leave to mention likewise, that the Sheep which you have a Mind to keep for Rams, should be of those Lambs where the Ewe has two at a Birth. To this, I say, I have known them do very well; but if the single Lamb be stronger than a Twin-Lamb, as some say, why will he not make a stronger Ram for the Rutt, than

than when there are two at a Birth? But the Strength of the Dam, perhaps, as well as the Sire, produces strong Twins; and it may be, one may be as strong as the other. The Case has been long in Dispute; but I cannot pass it by in a Treatise of this Kind, without mentioning of it; for my own Part, I think, if the Ram was good, the Ewe strong at the yeaning Time, and the Lambs taken care of at that Season, and sufficiently nourished, a Twin-Lamb may be as good as a single one.

Of Severing of Sheep, and Parting the Flock.

AS for the distinguishing Characters of Sheep in their several Stages of Life, I have explained that partly before; viz. that at a Year old they are called *Hogs, Hoggets, or Hogards*: But I forgot to observe, that the second Year the Female is called a *Theave*, and if she passes that Year without taking the Ram, she is then called a *Double Theave*, and is accounted by the learned Sheep-Masters, the best Ewe that can be employed for bringing the strongest Lambs. So of the Male Sheep, we may reckon them Weather or Wedder-hogs, after they are past the Character of Lambs, or are of a Year's Growth; and this Name is indifferently given to the Males, whether they have been cut for Weathers, or whether they are designed for Rams. The best Way, indeed, is to make the Distribution of our Sheep after sheering; for then we shall best discover which are strong, and which

which are weak, and order their Pastures accordingly.

THE Sheep which we design for Feeding or Fattening, should be put by themselves.

THE Ewes by themselves.

THE Weather-Hogs and Theaves by themselves.

THE Lambs by themselves.

THE Weathers and Rams by themselves; for else the Strongest would hurt the Weakest, and not suffer them to pick the Food which might be the most nourishing to them.

N. B. IF, in the Flock, any Sheep happens to be distempered, let them have a Pasture distinct from the Rest, of good fresh Grass, and as they improve, sell them off: It is very certain, that Sheep are best improved by often shifting their Pasture.

Of Washing and Shearing of Sheep.

AS for the Season of the Year when we ought to prepare Sheep for Shearing, it ought to be at such a Time in the Summer when their Wool is in deep Staple; and that there may be Time enough for the Sheep to renew their Wool before the hard Weather comes on. It is thought proper
D by

by many of our able Farmers, to let the Sheep sweat in their Wool before it is shorn. But great Care must be taken that the Wool be well washed before it be cut. Mr. *Fitzherbert*, the first *English* Writer of Husbandry of any Note, has prescribed the following Method, to be observed in the Washing and Shearing of Sheep, which I shall give you in his own Words, as it justly agrees with the Practice of our Time.

‘ In June is tyme to shere sheep, and or they
 ‘ be shorne they must be wel washen, the which
 ‘ shall be to the owner great profit in the sale of
 ‘ his Wool, and also to the Clothe-maker; but yet
 ‘ beware that thou put not to many sheep in a
 ‘ pen at one time, nother at the washing nor at
 ‘ the shering, for fear of murdering or over-
 ‘ pressing their fellowes, and that none go
 ‘ away tyl he be clean washen, and se that they
 ‘ that hold the sheep by the hed in the water,
 ‘ hold his hed high enough, for drowning.

‘ In shering of shepe take hede of the Sherers
 ‘ for twincking the shepe with the Sheres, and
 ‘ especially for prickynge them with the poynt of
 ‘ the Sheres, and the Sheparde be always ready
 ‘ with his Car-bor to salve them. And se that
 ‘ they be wel marked, bothe eare marke pyche
 ‘ marke and Rodel marke, and let the woll be wel
 ‘ folden or wonde with a Woll wynder that can
 ‘ (has) good skyl thereof, the whych should do
 ‘ much good in the sale of the same. ’

BUT

BUT to explain our Author a little further : We must observe, that though he has appointed the Month of *June*, and others since his Time have followed that Season for washing and shearing their Sheep ; yet must we have a great Regard to the Weather, that it is not inclinable to Rain at the Time of washing the Sheep, nor too cold at the Shearing-time ; but let the Weather be such, as may dry them soon after washing, and warm the Ground against they lose their Fleece. At the Time of Washing, he well directs, that Care should be taken in holding up the Head of the Sheep, to prevent not only its drowning, but taking in any Quantity of Water at the Mouth. After the Wool is well cleaned, put your Sheep upon the lightest and highest Land you have, which will be a Means of preserving the Wool clean, and in good Condition, till they are shorn ; which Work of Shearing, may be done three or four Days after the Washing ; observing at the shearing Time, to take care of winding the Wool, and laying it up clean and dry.

IN some Places they shear their Sheep twice a Year, *i. e.* about the End of *April* or Beginning of *May*, for the first Time ; and about the Beginning of *September* for the other Season. Where this is practised, it is also frequent to shear their Lambs in *June* ; but I cannot advise this Practice, no more than others, who are skilled in the Management of Sheep, who will not allow the Shear-

ing of Lambs till they are full a Year old, and are then called Hogs, or Hoggets, or Hoggards.

As concerning the Fineness of Wool, I have already given my Sentiments how far it depends upon the Food or Diet of Sheep ; *i. e.* from the finer Grass comes the finest Wool, as the coarser Wool is always the Product of coarser Diet.

THE Ancients remarked certain Countries which were famous for Wool. That in most Esteem with them, was the Wool of *Puglia*, which in *Italy* was called the *Greek Fleece*. The next in Goodness, was esteemed the Wool of *Italy* ; and after that, the *Milesian* Wool. We find in the ancient Writings, that the Wool of *Puglia* was short, like that of our Mountain Sheep. The Wool about *Tarranto* and *Cannas*, has been likewise in Esteem. And nearer our Times, the *Spanish* Wool has been accounted valuable : But we find now by Experience, that no Wool upon the Face of the Earth, is equal in Value to the *English* and *Irish* Wool.

Of the Management of Wool.

WOOL, next after Shearing, is shiftned, (as it is called) or sorted in three or four Parcels ; *viz.* the finest and strongest for Combing, is taken from the Back, the Sides, and the hinder Part of the Fleece.

THE

THE second is called Clothing-Wool, which is a shorter Sort, taken from the Neck and the Belly of the Fleece. It is commonly divided into two Sorts, chiefly used for making of Broad-Cloths; these are only distinguished from one another in their Characters, by being shorter or longer, or finer or coarser. These two Sorts are carded and *luckt*, which is very different from Combing.

ANOTHER Sort is taken from the Tail and coarse Part of the Flank, which being full of rude Locks and long stickel Hairs, is not fit for the above Uses, but is commonly spun for coarse Blankets, Mops, or such other gross Manufactures.

Wool is sold by Weight, 7 Pounds making a *Clove* of Wool, 2 *Cloves* a *Stone*, 2 *Stone* one *Todd*, 6 *Todd* and a *Stone* one *Wey*, 2 *Weys* a *Sack*, 12 *Sacks* a *Last*.

IN some Countries the *Wey* is 256 *l.* *Averdupoise*, as in the *Suffolk Wey*; but in *Essex* the *Wey* is 336 *l.* the *Wey*.

A *Todd* of Staple Wool, cast or sorted, will yield, if it be good broad Wool, (when it is combed) after the Rate of 9 *l.* out of 12 *l.*

N. B. IN *North-Wales* the Pound of Wool weighs equal with five *English* Pounds; But

we shall take no further Notice of that Weight in this Place.

ONE Pound of the best picked Wool will cost 6 *d.* or 8 *d.* according as it is in Goodness; so a Dozen is 6 *s.* or 8 *s.* and the Combing of a Dozen of Wool is 2 *s.* As it is observed above in the Combing of the Wool, that nine or ten Pounds at most will comb out of a Dozen; so that which remains, or the Clearing of the Comb, is called *Nill*, or *Oyl*, which commonly answers the Charge of Soap and Fire for Washing, and Oyl and Fire for Combing.

N. B. The Firing used for combing, is of Charcoal.

OF the *Nill* or *Oyl* are made the *Yorkshire* Cloths, Napt Frizes, Blankets, &c. This is generally sold from 4 *d.* to 6 *d.* according to the Goodness, and the Market.

WHEN combed Wool is given out to be spun, according to its Fineness, it is directed to the Spinner at several Prizes: As for Example, some at 2 *s.* 6 *d.* per Pound, and some at 3 *s.* some more, some less; and according to the Number of Skains returned by the Spinner in every Pound, so are they paid, or have proper Deductions made; every Skain consists of six Knots, each Knot of eighty Bouts, and each Bout (which is the Compass of a Reel) is a Yard and three Quarters. The Price in *Essex* for spinning each Skain, is 1 *d.* so that according

ding to the Fineness or Coarseness of the Yarn, the Spinner has more or less for every Pound of Wool. I have known some Pounds that have been spun so coarsely, that a single Pound has amounted to no more than sixteen Skains, or 16 *d.* to the Spinner; while at other Times, I have seen some of the finest Wool spun to thirty-six Skains in a Pound. It is therefore necessary, that whoever sets about a Work of this Nature, should be well apprized of the Performance of those Spinners he employs, before he delivers out his Wool, that those who are the best qualified for fine Spinning, should have the finest Wool; and the coarser should be delivered to those who are the most indifferent at the Wheel; for otherwise the Proprietor might sustain considerable Losses. It sometimes happens, that the Webster, or such other Person as delivers out the Wool, will insist upon a greater Number of Skains to be spun from each Pound, than the Wool will bear, which is a Hardship upon the Spinner; but the Webster likewise, as I observed above, is a Sufferer, if he delivers out fine Wool, and the Spinner does not return him the Number of Skains which he set it at.

EVERY Pound of spun Wool will yield double to the Webster of what he gives to the Spinner, or thereabouts: This in Trade is called Doublings; and when the Webster sells to the Weavers, he commonly sells at Doublings.

BUT for the better explaining the Account of Combing, Spinning, and Weaving, to my Reader, I shall insert the following Bill of Expences, *viz.*

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Paid for 16 <i>l.</i> of fine cast Wool, at 8 <i>d.</i> per <i>l.</i>	}	00	10 08
For Combing out of the aforefaid Wool, and making it into Tops, one Dozen, the rest being Oyl or Nill.	}	00	02 00
Paid for Soap, Oyl, and Fire, for wash- ing and combing the 16 <i>l.</i> of Wool.	}	00	02 00
For Spinning 12 <i>l.</i> of Topt Wool, at 3 <i>s.</i> per <i>l.</i>	}	01	16 00

12*l.* of Topt Wool spun, comes to 02 10 08

THE Webster pays for 12*l.* of Tops of Wool ready spun, as above; and the following shews his Profits when he sells it at Doublings to the Weaver.

Received for 12 <i>l.</i> Weight 3 <i>s.</i> Yarn,	}	03	12 00
fold at Doublings.			

For 4 Nil or Oyl		00	02 00
------------------	--	----	-------

In all		03	14 00
--------	--	----	-------

From whence deduct 2 <i>l.</i> 10 <i>s.</i> 8 <i>d.</i>	}	02	10 08
the whole Charge for Spinning,			

The Webster gets clear Profit by Spin- ning	}	01	03 04

The

The Weaver's Account.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
The Weaver pays for 12 <i>l.</i> of Yarn,	03	12	00
This, if it be weaved into Callimanco which is half Ell wide, will make (after the Rate of 5 Yards to each Pound of Yarn) 60 Yards of Stuff, the Weaving of which, at 4 <i>d.</i> per Yard, comes to	01	00	00

So the whole Cost of Combing, Spin- ning, and Weaving 12 <i>l.</i> of Wool, comes to	04	12	00
--	----	----	----

The Weaver sells the 60 Yards of super-fine Callimanco, at 20 <i>d.</i> per Yard, which comes to	05	00	00
--	----	----	----

From whence take the	04	12	00
----------------------	----	----	----

And the Weaver gets above the 4 <i>d.</i> per Yard,	00	08	00
--	----	----	----

BUT after this, the Stuff is to be scoured, died,
and preft, which ftill increafes the Charge, as well
as the Value.

FROM the above Paragraphs, we may be able to
guesſs at ſome Part of the Profits ariſing to the
Webſter and Weaver. But there are yet many
more conſiderable Advantages which ariſe to the
Undertakers (reſiding in Country Towns) who
have

have a Stock before-hand, to employ the Poor that can work at the Wheel : As for Example,

IF a Shopkeeper can afford to have Stock enough to buy in all necessary Goods for the Use of the Poor at the first Hand, and distributes those Things which they call for, at a common trading Profit to himself, he is a Gainer that Way ; and moreover, he is a Gainer by receiving their spun Wool at the first Price as Money, which he sells out at Doublings ; for it is very seldom any ready Money passes between these Shopkeepers and the Spinners. I have known the Ballance of an Account between some industrious Spinners and a Shopkeeper of half a Year's standing, where the ready Money paid to the Spinner has amounted to no more than one Penny. By these Means, the Poor of many Places are employed, and rendered capable of supporting their Families, and of raising Estates to such who are rich enough to barter with them for their Work ; I mean the Undertakers or Websters. But the particular Case I have mentioned, is but trifling, with regard to what we observe in some Places famous for carrying on the Woollen Manufactures ; such as in *Devonshire* and about twenty Miles round the City of *Exeter*, where the Manufacture of Serges is carried on. Secondly, in the County of *Norfolk*, and twenty Miles round the City of *Norwich*, where the Stuff Manufacture is so famous.

Thirdly,

Thirdly, IN the County of *Essex* for forty Miles every Way, famous for the making of Bays and Callimancoes.

IN the County of *Wilts*, from *Warminster* South to *Malmsbury* North, inclusive, with all the great Towns of *Troubridge*, *Tedbury*, *Froome*, *Bradford*, *Westbury*, the Devises, &c. the Manufacture of Medley Cloathing, Drugget-making, and fine *Spanish* Clothing, is carried on. The Counties of *Gloucester* and *Worcester*, from *Cirencester* and *Stroud-water*, to the City of *Worcester*, where the White-clothing Trade for the *Turkey*-Merchants is carried on.

THE Counties of *York* and *Lancaster* are famous for Kerseys and *Yorkshire* Cloths. In all these Places, not to mention many others, how populous are the Cities and Towns, and how immensely rich are the Undertakers. In the Vicarage of *Hallifax* alone, they reckon 100000 Communicants, 16 Chappels of Ease, beside fourteen or fifteen Meeting-houses. This Parish is indeed very properly situated for the Manufacture of Wool, having the Convenience of Water, Coals, and other Things, proper for that Work and the Convenience of Mankind. The whole Parish is a Circle of twelve Miles Diameter, like a planted Garden, or a Colony, where every Family lives, as it were, within it self, and by it self, for the propagating of their Business: And yet how populous soever this Place is, if you pass through it
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in the Middle of the Day, you shall hardly see any to ask the Way of; but after Working-Hours in the Evening, you are surprized at the Multitude of People who appear in every Quarter.

BUT it would be endless to enumerate the many Towns and Villages in *England*, which subsist purely by the Woollen Manufacture, as it would likewise be impossible to give a List of the several Families, that have raised great Estates by the Woollen Trade. We may say, with a late Author of good Credit, that in the Manufacturing Counties we see the Wheel going almost at every Door; the Wool and the Yarn hanging up at every Window; the Loom, the Winders, the Combers, the Carders, the Dyers, and the Dressers, all busy; and the very Children, as well as the Women, constantly employed, and, according to the old Proverb, *As the Labour is, so is the Living*: For where the meaner Sort are full of Work, they never want comfortable Subsistence. On the other Hand, in those Counties where the Poor are unemployed, you see the Women and Children, for want of Business, the first sitting idly at their Doors, and the others playing in the Streets, subsisting purely on the Labour of the Father, which perhaps may not amount to more than 8 *d.* or 10 *d.* per Day, although the Number of his Family may be six or seven.

It is for this Reason that we find, in many Counties where the People are not immediately employed,

ed, or cannot find Work at Home or in the Neighbourhood, the Women, and even the Children, during the Summer, are frequently forced to seek Work in remote Places, in making Hay, gathering Fruit, Hops, &c. in order to raise Money to subsist them during the Winter, in their Cottages at home; while in the Manufacturing Countries, the very meanest among the People, from the most aged to the youngest, find something to employ themselves, which helps towards their Maintenance.

It is not however necessary, that every Town or Village in *England* should employ their Poor on the Woollen Account; the Places which are already established for that Manufacture, have been thought by some to be sufficient for the present Use of the Nation, and its Trade abroad; especially at this Time, when the Woollen Manufacture is attempted in Foreign Countries. But there is great Reason to believe such Attempts can never injure our *English* Woollen Trade. Because as there are abundantly more Holidays in the *Roman Catholick* Countries than there are with us, in the Compass of a Year, so the People of those Countries cannot have so many Working-days as we have in *England*; neither in Despotick Governments are People so much invited to gain Estates, as in a free Nation. This, I suppose, has given Reason to a great Man to say, and for all Men of Understanding to judge, that the Woollen Manufactures endeavouring to be established abroad must

must quickly submit to the *English*, which then will open a new Door to the Employment of those People, who at present have little or nothing to do with us.

WE have many Instances which seem to prove this Conjecture to be reasonable. The Attempt of setting up Manufactures of Watches in *France*; where, notwithstanding many of the best Workmen in that way were assembled, with all the Encouragement they desired, yet most or all of them that could return to *England*, were sent back after a few Months: Either because they did not find it to their Advantage to stay there, through the Number of Holidays they were obliged to keep in that Country; or that they wanted some particular Branch of the Business to support their Work, either in Excellency, or the same Cheapness they were used to meet with in *England*.

ANOTHER Instance in setting up a Manufacture in a Country where it has not been accustomed, proving abortive, was lately the Case of raising Silkworms at *Chelsea*; where the Expence of making the Houses and Conveniencies for them, was more than the Profit could possibly amount to in many Years by the Worms. I have in some of my other Works given an Account of a Project in King *James* the First's Time, for the producing Silk in *England*; upon which Account a Patent was granted, and a Proclamation published, for the Encouragement of those who would assist in the Design.

Design. But I find that Encouragement went no further than to occasion the planting great Numbers of Mulberry-Trees, for the feeding of Silkworms. And I cannot trace any Account which gives me Room to judge that the Silk made in *England* amounted to more in Value, than what we may likely meet with in particular Houses at this Juncture.

IN *Italy*, which is the Fountain of Silk, although we receive such large Quantities from thence, it is not effected by a particular Body of Men, but every one who has a little *Villa*, keeps a Colony of Silkworms there, without any extraordinary Expence, and is looked after only by some poor Woman of the Place, who has her Residence there, for her Trouble of feeding and taking care of them till they spin. By this Means, whatever the Produce of Silk happens to be in one *Villa*, whether 1, 2, 3, 4, 5, or 6 *l.* at most; yet in the whole, the Quantity of Silk collected in *Italy* every Year, amounts to an immense Sum, if we were to regard only the Bales we receive yearly from that Quarter; but the Factors for our *English* Merchants have timely Notice to agree with Persons who breed Silkworms, to bring their several Quantities of Silk to some certain Market at a set Day and Price, where they compile Bales of Silk of several Hundred Weight, which could not be produced by any particular Place in *Europe*. And thus we have all our *Italian* Silk from a seeming chargeless Care of the People, amounting to very valuable

valuable Sums every Year to the Nation from whence it is brought; which is not altogether disagreeable to what we have said of one Branch of our Woollen Manufacture.

WE must consider, that in *Italy*, as I observed above, there is little or no Expence in the Breeding of Silkworms: For even their Food, as one may say, grows on the Common, *i. e.* the white Mulberry-Trees upon whose Leaves they feed, grow, for the most part, in Hedge-Rows, which are there planted to shade the Gardens. Their Houses of Shelter are Places of different Use when their Time is over, and the *Stands* whereon they are fed, are made of a Sort of Hurdle; neither when they spin is there any Thing more necessary, than to stick here and there a flowering Stem of a Cabbage or Brocoly, or such other branched Plant. It is to be noted likewise, that the Hurdles whereon the Silkworms are fed, are hung upon Strings one above another, at about two Foot distance. It is said in that Country, that the Employment of raising of Silkworms is a *Passatempo* for the Women; which I can construe no better, than a Diversion, and a very profitable one in general to the Country. I have known even some of our *English* Ladies, who have diverted themselves this way, and have raised 2 or 3 Pound Weight of Silk in a Year.

BUT I shall now proceed to treat of the Distempers of Sheep, and prescribe the best Remedies for them.

Of

*Of the Distempers which Sheep are subject to,
and the most approved Remedies for them.*

BEFORE I enter upon Particulars, it will be necessary to observe, that the Ray and the Scab are the most common Distempers Sheep are subject to, and both proceed from poor Food: But when they have once got either of these Distempers, better Pasture alone will not help them; but Tar prepared must be used, as well as other Medicines. The Scab especially, is such a Distemper, as one has good Reason to judge it infectious; and such Sheep therefore as are affected with it, should be separated from the Flock till they are recovered. If you discover a single Sheep infected, remove him immediately, and give him a little Bay-Salt finely ground, sprinkled over the first Grass he feeds on every Morning; and if he pines, as he will be apt to do upon leaving the Flock, let him feed two or three Days before you sprinkle any Salt before him. But to come to the Remedies of these common Distempers in a more particular Manner; I shall first direct how to prepare Tar, which a Shepherd should never be without.

*To prepare Tar to apply outwardly to Sheep, for the
Scab, or the Ray.*

TAR may be either mixed with the Grease of Poultry, or Goose-Grease, or Hog's-Lard, or But-

ter that has been made up without Salt: To every Pound of Tar, we may use Half the Quantity of any of the former, which must be well mixed together. Some chuse to melt their Butter to Oyl before they mix it with the Tar; and it mixes the better, and is more healing.

To make Broom Salve, an excellent Remedy for the Scab, or any other Distemper that appears on the Skin of Sheep.

THIS Salve is of great Use to such as have large Flocks of Sheep; it answers the End of prepared Tar, and is much cheaper than Tar, where Broom is to be had near at hand.

To make this; Take twenty Gallons of Spring-Water from a gravelly Soil, rather than any other, or in the Room of that, as much clear River or Rain-Water; put to this, of green Broom Tops, Stalks, Leaves, and Flowers, shred small, about ten Gallons, and let it simmer or boil gently, till it becomes of the Consistence of a Jelly, or till it be pretty thick; then add of stale human Urine, two Quarts, and as much Beef or Pork-Brine, strong of the Salt; and to these add about two Pounds of Mutton-Suet, well melted and cleaned; stir these well together for about a Minute or two, till the Suet is mixt, and then strain all off into such a Vessel as you think convenient, to be kept for Use.

*How to use the Broom-Salve for the Ray and Scab,
in Sheep.*

THIS Salve is very speedy and certain in curing the Distempers called the Ray and the Scab in Sheep.

THE Ray is that which we find happens from too much Wet, or such Cause as makes Sheep to defile their Tails; the Heat of the Dung frequently falling, frets the Parts, and lodging in the Wool time after time, hurts the Skin, and wounds it by Degrees. To remedy this, clip off the Wool close to the Tail, and anoint the fore Parts with either of the Salves mentioned above. It is good likewise, to give them dry Meat with a little Salt sprinkled in it for a Day or two. Likewise Allum-Water is good to wash any sore Place about a Sheep before Tar is put on. I have seen this Broom-Salve used with good Success, and I prefer it, in many Cases, to the prepared Tar, because it answers the same Ends as that Preparation, without foiling the Wool.

IF we use either this or the prepared Tar to a Sheep when it is in full Staple, (that is, before it is shorn,) shed the Wool, or open it, or divide it, that you may see the enflamed Part, and anoint it well, and the Parts about it, at least half an Inch round; then close the Wool again, and the Distemper will cease, and the Wool not be discoloured.

WHEN a Sheep is troubled with the Scab, we may presently discover it by his rubbing the distempered Part against Trees or Posts, and with his Horns ; and as soon as we perceive this, we should apply either of the prepared Medicines.

THE Broom-Salve is also of great Use in destroying the Ticks, or Sheeps Lice, and the Wool will not be worse for Sale.

IF we use this Salve to Sheep newly shorn, let it be warmed, and wash the infected Part with a Sponge, or woollen Rag dipt into it.

BUT as the Scab in Sheep proceeds chiefly from poor Diet, so when we apply this outward Remedy, give them fresh and good Pasture ; for good Food will greatly help the Cure, as well as prevent the Evil. Sheep delight in shifting their Pasture often, and if they have Plenty, they will take only that which is wholesome for them ; but otherwise they will be forced to eat such Herbs as may prove injurious to them.

A Medicine against infectious Distempers, and to preserve Health in Sheep.

TAKE the Berries of Juniper well dried, and beat them small ; or for want of them, young Tops of Juniper dried gently in an Oven, beat fine, and passed through a fine Sieve ; put two Drachms of this

this Powder to half a Bushel of Oats, and to that add, of common Sea-Salt, about a Quarter of a Pint; mix them well together, and give it your Sheep in wet Weather, or in any contagious Time, to keep your Sheep in Health. One may give this Medicine three or four Times a Year; and it is observable, that when Sheep are already in a good State of Health, they will hardly taste of it, unless they are shut up in a Penn, and kept from other Meat. But on the other Hand, if they are inclining to the Rot, or any other inward Distemper, they will readily eat it. It is a Remark worthy Observation, that where the Juniper grows frequently, Sheep never are subject to the Rot. The Proportions above may be observed in larger Quantities, and the Medicine may be given for a Day or two at a Time at most, giving them dry Hay besides.

To destroy Ticks or Tickells in Sheep, which annoy and spoil the Skins of Sheep, and keep them low in flesh.

THERE have been several Waters and Unguents which have been applied by famous Shepherds to destroy the Tick, and I doubt not but some of them have had very good Effect; but the following is of great Esteem among those who have used it. Take the Root of the common Wood-Maple, or *Acer minus*; cut it in Chips, or grind it, and make a Decoction of it in common Water, the Quantity about an Ounce to a Pint of Water,

which must be drawn clear from the Root as soon as it is cold: This Water being applied to the Skin of the Sheep where the Ticks happen to prevail most, is a certain Destroyer of them. I suppose I need not tell a bred Shepherd that the Wool must be first gently opened with the Fingers, before the Liquor is applied. Some use a Linnen Cloth that has been well soaked in it; others apply this with a Sponge to the Sheep, immediately after they are shorn, to prevent the Ticks for the future, and even to destroy the Eggs of the Ticks which may remain upon the Body of the Sheep.

A SKILFUL Shepherd near *Dorchester* in *Dorsetshire*, tells me, That a Water made of Tobacco Stalks, boiled with Water and common Salt, is a sovereign Remedy against the Ticks in Sheep, applying of it to them with a soft Brush as soon as they are shorn. The Quantity of Tobacco which he uses, is an Ounce to a Quart of Water, and a Drachm of Salt to each Quart. He is a Man of Credit in those Parts, which I regard so much the more, because I have been told in that Country, that there are no less than 800000 Sheep continually feeding within six Miles round *Dorchester*, which Place is allowed to abound more in Sheep than any Part of *England*. The Soil thereabouts is generally chalkey, and the Grass very short. But I cannot conclude this Receipt without observing what another curious Shepherd directs; that to apply either of the above Liquors in the best Manner, the Wool of the Sheep should be opened

opened all along the Ridge of the Back, and the Liquor so poured into that Opening, as to run over each Side of the Body. This may be done with less Trouble than the former, when Sheep are deep in Wool; and considering the Cheapness of either of the Liquors, I think the last the best Way, as it is the most expeditious.

Of the Worm in the Foot, and the Cure.

THE Worm in the Foot shews it self by a Swelling between the two Claws, which makes the Sheep go lame. There is no other Remedy for this, known to any Shepherd, but what has been published by Mr. *Fitzherbert*, a Gentleman of *Northamptonshire*, who wrote the first Book of Husbandry in *England*, printed in the Year 1525. His Words are these:

‘ There be some shepe that have a Worme in
 ‘ hys fote that maketh them to halte. Take
 ‘ the Shepe and look betweene his clyfe, and
 ‘ there is a lytle hole, as much as a great
 ‘ pyns hed, and therein groweth, fyue or fyve
 ‘ black heres lyke an ynche long and more:
 ‘ take a sharp poynted knyfe and cleft the
 ‘ Skyn a quarter of an ynch long above the hole
 ‘ and as much beneth, and put his one hande in
 ‘ the holowe of the fote under the hynder cleft
 ‘ and set his Thumb aboue almost at the fyt
 ‘ and thrust his fingers undernethe forward,
 ‘ and with your other hand take the black heres

‘ by the end, or with the knives point and pull
 ‘ all the heres a lytle and a lytle and thrust af-
 ‘ ter his other hand with his finger and his
 ‘ Thumbe, and there wyl come out a worne
 ‘ like a pece of fleshe nigh as much as a lytle
 ‘ finger: And when it is out put a lytle Tar
 ‘ into the hole and it will shortly hele, ’

THIS is Mr. *Fitzherbert*, and the Style of his Times. But I suppose my Reader will expect some Explanation of his Sense in the more modern way. When we find a Sheep lame of any Foot, we are to examine it between the Hoofs, and if he is troubled with this Distemper, you will find a Hole big enough to admit a Pin's Head, in which you may observe five or six black Hairs about an Inch long; then with a sharp-pointed Knife open the Skin a Quarter of an Inch on each Side the Hole, and by pressing of it gently with your Thumb above the Slit, take hold of the black Hairs with the other Hand, and there will come out a Worm like a solid Piece of Flesh, about two or three Inches long. The Wound must afterwards be anointed with Tar, to heal it, or we may use the Broom-Salve instead of Tar.

Of the Cough in Sheep.

WHEN Sheep are troubled with the Cough and Shortness of Breath, bleed them in the Ear; and take some Oyl of Almonds and white Wine, which mix well together, and pour into their Nostrils a-
 bout

bout a spoonful at a time. We may add that when Sheep are thus afflicted with Cough and Shortness of Breath, they are subject to be scabbed about their Lips ; the Remedy for which, is, to beat Hyssop and Bay-salt, of each like Quantities, together, and rub their Lips, their Palate, and their Mouth with it : But if there should be any ulcerous Places, anoint them with Vinegar and Tar well mixed together.

A Remedy when Sheep happen to swallow any venomous Worm, Horse-Leach, or poysonous Herb.

WHEN Sheep have happened to eat any Thing that occasions their Body to swell, bleed them in the Lips, and under the Tail, giving them a large spoonful of Oyl Olive, or sharp white Wine Vinegar, or two good spoonfuls of human Urine, from a sound Person.

Against the Murrain.

TAKE the dried Flowers of Wormwood, or of Rue ; mix them with common Salt, and give it to such Sheep as are infected, or are in danger of being infected. About a Drachm is enough for each Sheep in a Morning, in a spoonful or two of human Urine.

*The Red-water in Sheep, and of the common Cure
for that Distemper.*

THE Red-water is accounted one of the most dangerous Distempers attending the Flock, bringing whatever Sheep it attacks to Death in a short Time, unless it be discovered at the first coming; whereas in the Rot, a Sheep that happens to be taken with it, may live for a Month, or more. The Remedy for the Red-water, is to bleed the Sheep in the Foot, and under the Tail; then apply to the fore Places, the Leaves of Rue and Wormwood, or the tender Shoots of either of them, bruised, and well mixt with Bay-Salt; and give them, by way of Diet, fine Hay in the Mornings and Evenings, or other dry Meat, sprinkled a little with Salt.

For the Wildfire in Sheep.

THIS is as dangerous and infectious a Distemper as any that can attend the Flock, and was for a long time held incurable; but some of the most intelligent Shepherds have made a Salve which has done great Service. Their Medicine is made of Chervil, or *Cerrefolium*, (which is the *Latin Name*) bruised, and beat up with stale Beer, with which the sore or afflicted Part must be anointed. Or, to take another Method, which is as certain, prepare a Wash made of common Water, one Quarter of a Pint, the Quantity of a Horse-Bean of white Cop-pers; wash the sore Part with this Water twice or thrice

thrice in an Hour's Time, and it is a certain Cure. I have known a Shepherd of good Understanding, use common Writing-Ink in lieu of these, with good Success.

For Sore Eyes in Sheep, and the Remedy.

ALTHOUGH Sheep have a Dulness in their Eyes when rotten, as I have mentioned before; yet sometimes they are subject to have a Flux of Humours, which weakens their Sight, and without timely Help, will bring them to be stark blind. Some of our Shepherds use, on this Occasion, the Juice of Celandine, which they drop into the Eye; others use with as good Judgement, the Juice of the Leaves of Ground-Ivy, (or as it is called in *Latin*, *Hedera terrestris*) which should be forcibly spirted out of the Mouth into the Sheep's Eye; or a Decoction made of either of the foregoing Plants in common Water, will do as well; and one may have always the same Remedies ready at hand, without the Trouble of seeking the Plants when we have Occasion for them. It is necessary, however, to observe, that when we make these Decoctions, about five or six Grains of Allum may be boiled in every Pint of Water; or if we use white Copperas in this Case of the Eyes, infuse about seven Grains of the Copperas in half a Pint of fair Water, and it is a sovereign Remedy.

Of the Tag, or Belt, in Sheep.

SHEEP are said to be tagged or belt, when they have a Flux, or continued Running of Or-dure, which lighting upon the Tail, the Heat of the Dung, by its scalding, breeds the Scab. The common Cure for this Distemper, is first to cut off or shear the *Tags* of Wool that are *rayed*, so as to lay the Sore bare; then wash the raw Part with human Urine, or strong Beef or Pork Brine; then strew the same Place with fine Mould, or dried Earth, and after that, lay on Tar mixed well with Goose-Grease or Hogs-Lard; repeat a Strewing of fine Mould, and it is a certain Cure, as far as outward Application can act. This is the common *Recipe*; but to give them as a Diet, Oats, fine Hay, with a little Sprinkling of Bay-Salt finely beat, and a small Quantity of the Powder of Juniper Berries will certainly remove the Cause.

N. B. THIS Distemper is generally occasioned by Cold, and poor Pasturage; therefore Change of Pasture is likewise helpful.

Of the Measles, or Pox in Sheep.

THIS Distemper shews it self at first, in the Skin, in small Pimples, either of a red or purpleish Colour, and is very infectious; so that whenever a Sheep is attacked with it, it ought instantly to be removed from the Flock, and put into a fresh
springing

springing Pasture. The outward Application used by the Shepherds, is to boil the Leaves of Rosemary in strong Vinegar, about three Ounces of Leaves to a Pint of Vinegar, and to wash the Pustules, or sore Parts, with that Decoction.

Of the Blood in Sheep, and its Remedy.

THIS Distemper, which Sheep are sometimes subject to, is not mentioned by any Author, that I know of, except Mr. *Fitzherbert*. His Description of it, and its Cure, he gives us in the following Words:

‘ There is Syckenes amonge shepe is called
 ‘ the Bloude, that sh:p. that hathe that wyl
 ‘ dye sodenly, and or he dye he will stande styll
 ‘ and hange downe the hed, and other while
 ‘ quake. If the Sheparde can espye him,
 ‘ take him and rub him about the hede and
 ‘ especiallye about his eares, and under his
 ‘ eyne, and with a knyfe cut off his eares in
 ‘ the myddes, and also let hym blede in a
 ‘ bayne under his eyne, and yf he blede well
 ‘ he is lyke, to lyue, and if he blede not then kil
 ‘ him and save his Flesh, for that yf he dye by
 ‘ hymself the flesh is losse, and the Skyn wyl
 ‘ be farre roddier lyke blode more than another
 ‘ Skyn shall be. And it taketh mosse comenly
 ‘ of the fattest and best lykinge. ’

THIS Distemper I take to be a Sort of Measles or Pox, attended with such a Degree of Feaver,

as

as will not suffer any Breaking out in the Skin ; for it is generally observed, that the Skin of such a Sheep, as Mr. *Fitzherbert* takes Notice, is much redder than the Skin of any other Sheep in any other Distemper. His Directions, however, are very proper, in bleeding him as we perceive him stagger, by cutting off the upper Part of his Ears, which is the most ready way ; and by bleeding him under the Eye immediately after ; which forwards the Cure begun in the cutting the Ears ; for thereby the Head is immediately assisted, and, as a good experienced Shepherd has told me, he finds them soon to be recovered. But as from the Beginning of the Distemper, to the Death of the Sheep, it is not more than five or six Minutes, so a Shepherd ought to be very watchful, and ready to bleed him, as soon as the foregoing Symptoms appear. Some would suppose this Distemper to proceed from Sheep's eating Pennygrafs, or (in *Latin*, the Plant called) *Nummularia*, while others suppose it to be an Over-fulness of Blood from rank Diet.

Of the Wood-evil, and its Cure.

THIS Wood-evil is seldom or never found among Sheep that have their Pasture in low Grounds, but for the most part amongst those that feed upon poor Up-lands, and Grounds over-run with Fern. In the mountainous Countries it is common enough, and some attribute it to the Sheeps feeding upon the young Tops of Fern, or some venomous Mush-rooms.

room : But be that as it will, the Remedy is, to bleed them in the Vein under the Eye.

THIS Distemper commonly happens about *April* or *May*, seizing the Sheep in the Neck, making them hold their Heads a-wry, and occasioning them to halt in their going. This is a Distemper which will occasion their Death in a Day or two, if the aforesaid Remedy of bleeding be not timely used, and fresh Pasture in low Lands provided for them.

I HAVE now done with Sheep, and shall proceed to account for the Improvement of other Cattle ; for it is not Sheep alone will make a Farmer : As *Mr. Fitzherbert* says ; A good Husbandman ought to know the raising and the Improvement of every Sort. His Words are as follow :

‘ These husbandes and they that wyl Thyue
 ‘ must haue both Shepe, Kie, Oren, Horses,
 ‘ Mares, and young Cattel, and to reyse and
 ‘ brede euery yere some Calves and Foles, or
 ‘ els shal he be a byer. And if thou shalt be
 ‘ Oren for the Plough se that they be younge
 ‘ and not gouty, nor broken of here nor her of
 ‘ Tayle nor of Pysel. And if thou bye Kye to
 ‘ the Payle se that they be yonge and good
 ‘ to mylk and fede her Calves. And if thou
 ‘ bye Kye or Oren to fede the younger they be
 ‘ rather they wyl fede, but loke wel that the
 ‘ here stare not, and that he lycke himself and
 be

' be whole mouthed, and want no teth. And
 ' tho he have the Goute, and be broken both
 ' of Tayle and Pysel, yet will he fede. But
 ' the gouty Ore wyl nat be driven far, and se
 ' that he haue a brode rybbe and a thick hyde,
 ' and to be louse skinned, that it sticke nat
 ' harde nor strait to his Ribbes, for then he
 ' wyl nat fede.



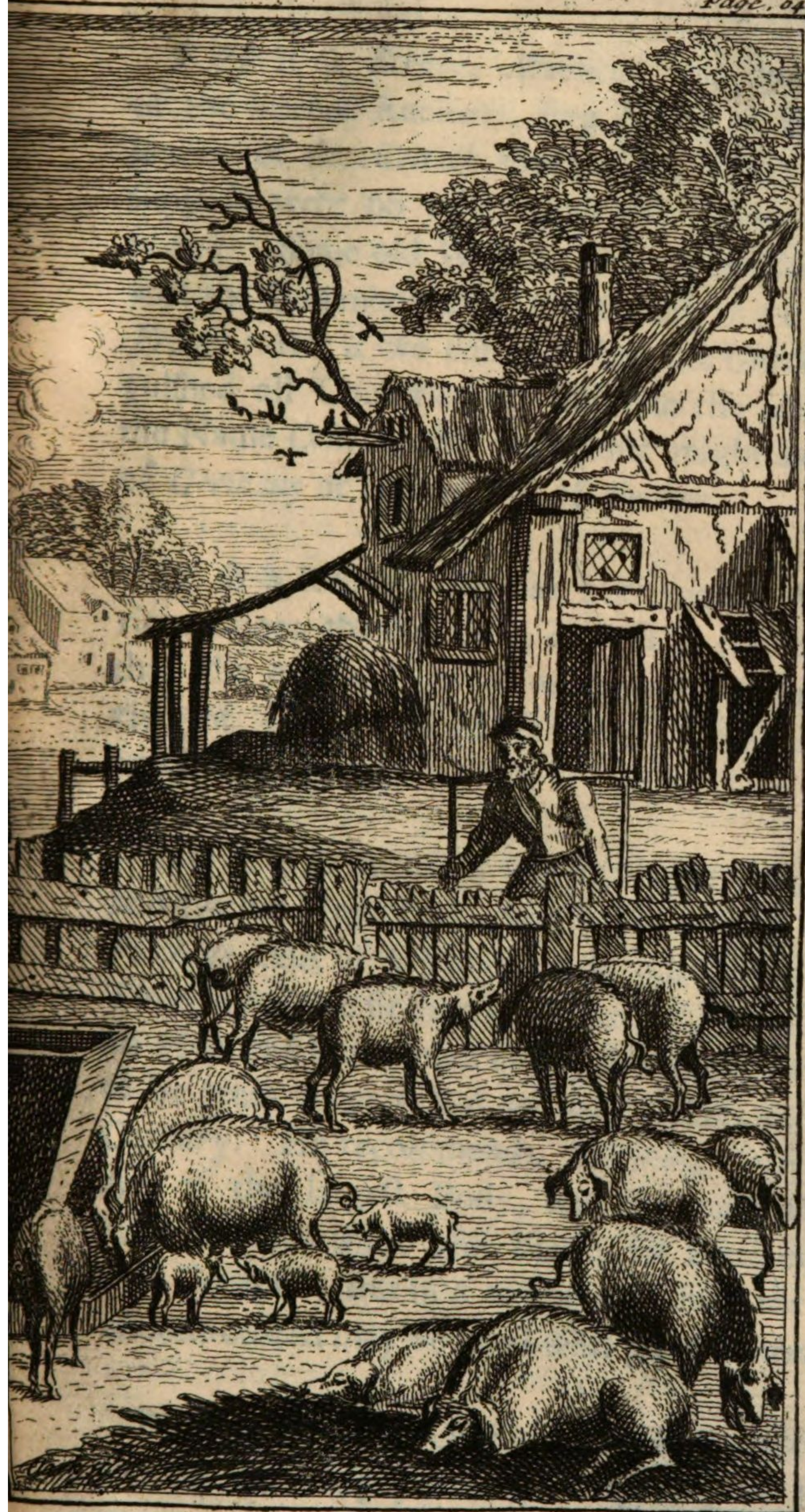
CHAP. II.

Of Swine, and their Improvement.

I CHOOSE to make the Swine follow the
 Sheep, as a Creature kept with little Trouble,
 and profitable in every Part of it. It is one of
 the great Necessaries about a Farm, and is bred at
 less Expence than any living Creature under the
 Direction of the Husbandman. It is an old Say-
 ing, that the Farmer is improvident and unwise,
 who seeks his Bacon at the *Butcher's*: For there a-
 rises to them who understand the Management of
 Swine, a greater Advantage than can accrue to
 those who keep the larger Sort of Cattle, either in
 breeding Swine for Pork, or for Bacon.

WHOEVER understands a Farm rightly, will
 know, that Swine are the chief Support of the
 Kitchen; and on the other Hand, the Kitchen is a
 great Support to the Swine.

VARRO,



I. Ross Del.

VARRO, *Strabo*, *Atheneus*, and many others of the learned Ancients, sing loudly of the Excellencies of the *Celtick* Gammons; which one may suppose were no other than the Hams of *Westphalia*. Some old Writers, indeed, would suppose that the Gammons they mentioned, were those of *France*: But if we consider that the *Greeks* distinguished all Countries on this side the *Alps* under the Name *Celtick*, the Gammons might as well be of *Germany* or *Holland*, as of *France*.

It is a Remark that has been made by the curious among the Ancients, as well as the Moderns, that the edible Parts of an Hog afford more Variety of Tastes than either Sheep, Oxen, or twenty other Creatures besides.

HOMER mentions one particular Person who had twelve Hog-coats, each containing fifty; and *Polybius* tells of a Thousand in one Place, at one Time, that were fit for the Market. *Varro* accounted an Hundred but a small Herd, and that there ought to be great Regard had to their Kind, and their Country. He recommends, likewise, those which are of the largest Body, and the most fruitful, their Bristles thick and black, for Breeding in a cold Country; but in a temperate Clime the more smooth-coated may be bred with good Success.

BUT to leave the Opinion of the Antients concerning the Shape, Make, or Quality of Swine,

we shall content our selves with remarking, that the large *Hertfordshire* Breed, or, as some would have it, *Lincolnshire* Breed, is the quickest Grower, and ripens to the largest Size of any we know with us. But this Sort must have great Store of Food when it is young: For unless it is continually served with Plenty of Wash in the junior Part of its Life, it will be stunted, and never come to Good. But upon setting it into the Fields, or any Grass, by its voracious Appetite, it will certainly get the Distemper called Gargol, or Gargut, (if we do not take care to restrain it a little) which will destroy it in a Day or two. But I shall say more of that, when I account for the Distempers in Swine.

ANOTHER Sort, which is famous in *England*, is called by some the Bantam Breed, or the *Guinea* Breed, or the *African* Hog, or the *Black French* Hog; but is more generally known by the Character of the Black Breed. This is, in my Esteem, the most profitable for breeding of Pigs, for Sweetness of Flesh, and for being easily raised and fattened. It is the most hardy of all others, and will make the best Shift for its Food, of any Hog that we know.

BUT the Sort of Swine which are the most frequent in *England*, and requiring the least Care, and generally bringing the most Profit, are the Cross Kind, bred between the two foregoing Sorts. These are every where coveted, because they easily shift for themselves, are great Breeders, or
more

more hardy than the large Sort, and sooner grow fat when they are put up. Their Flesh is likewise much more fine and delicate than that of the large Sort, which generally is coarse and loose.

THERE is another Sort which I received from the Earl of *Stamford*, which is likewise of a black Kind, but does not cleave or part the Hoof; or as one may say, is whole-hoofed. But the Flesh of these, I think, is not altogether so pleasant as that of the black Breed above-mentioned; neither are they so subject to be naturally fat, as the other black Breed.

BUT to give a more particular Description of the several Sorts which I have spoke of, I shall begin with the *Hertfordshire*, or *Lincolnshire*, which are both the same. They have very long and large Bodies, long Legs, long and thick necked, deep Sides, and carry long Bristles. I have seen some of these which have been well fed, that measured between twelve and thirteen Hands high, (each Hand four Inches;) and once for a Show at *Bartholomew-Fair*, there was one that measured upwards of thirteen Hands. But this Sort is not so easily fattened as the Cross-strain, neither will it pay the Expence of fattening so well in Proportion.

THE black or Bantam Breed have short Heads and Necks, are very deep-sided and bellied, even (almost) to reach the Ground; have thick Gammons, and short Legs; are short-snouted, thick-chined, and

their Bristles generally pretty strong. These are seldom more than eight Hands high.

THE Cross-strain, between these two, are of a middle Size, and not of any constant Colour; sometimes tending to the white of the large Sort, at other Times black, and sometimes mottled or spotted, and now and then griseled, between white and black, giving them almost a blue Colour. Some of these I have seen about ten Hands high. These in their Make, are generally more like the black Breed than the large Kind, and are mostly produced between a Boar of the white Sort, and a Sow of the black Breed.

IT is to be noted, that the Boars, for the most part, are much smaller in their Bodies than the Sows; and I suppose it is for this Reason, that the Boars of the white Kind are set to serve the Sows of the black Kind, the Coupling being effected more easily.

MY Lord *Stamford's* Breed, which is likewise black, is long-bodied, the Neck short, the Snout long, broad-backed, and somewhat longer-jointed every Way than the former cross-strained Hogs. These are not so plentiful Breeders as the black Breed, seldom bringing more than eight or nine at a Farrow; while the black Breed have brought me fifteen, sixteen, or seventeen, at a Time. Neither are the large *Hertfordshire* Hogs so prolifick as the black Breed; they bringing not above eight or nine at

at a Farrow, as far as I have had Opportunity of observing : But the cross-strained Kind, have, as I am informed, brought twenty Pigs at a Litter.

THERE is one Remark necessary to be made with Regard to the whole-footed Hogs Coupling with the cloven-footed Kind : I had by chance a Sow of the whole-footed Kind served by a Boar of the cloven-footed, and the Pigs were some of them whole-footed, others had two whole and two cloven, another with three whole Hoofs and one cloven, and another with three cloven Feet and one whole Hoof. I should be glad to have known whether the whole-footed Boar had any Concern in that Litter : and it may be worth the Enquiry of such Gentlemen who are of the philosophical Genius, and have the Opportunity of coupling Swine with whole Hoofs with those that have divided Hoofs, to remark whether the Male or the Female most prevails ; which may be seen, when the Pigs are constantly or more generally whole-hoofed, if the Boar is so, or divided in their Hoofs, if the Boar is of that Strain, or on the contrary : For this might help to explain to us a Difficulty which hitherto the best Philosophers have not been able to determine.

FROM these Observations, as far as they concern the Stature and Bulk of Swine, it seems reasonable to suppose, that the larger Kinds of Hogs should only be cultivated, in such Countries or Farms where there is the greatest Store or Plenty of Food

for the fattening of them for Bacon ; such as those Counties, for example, as abound in Mast of several Kinds, and afford great Quantities of Pease : Though, indeed, Barley-Meal, or sodden Barley, will do, as I shall treat more at large in another Place.

As for the middling and black Breeds, their Pigs may be reared on the Stubbles, which will make them thrive, and be fit for killing as Porkers, at little Expence. Those Pigs which we rear on Stubble, are called Shock-Pigs ; and as they do not require so much Food as the larger Kind, so they will find Nourishment sufficient in the Stubbles to feed them, within a Trifle of being valuable to the Butcher ; and by this, which may be accounted a short Nourishment, their Flesh will be more short, sweet, and better-tasted, than that of the Swine which eat of a grosser Food : Just as the Sheep fed upon *Banstead*-Downs, or short Grass, yield better Mutton than the Flesh of those Sheep fed on rich or high Pasture ; or as Rabbits which are fed upon short Pasturage, are always fatter in Proportion, and of a much finer and sweeter Flesh, though they are small, than such as have Plenty of Food.

It is worthy our Observation, that all Creatures which are subject to the Table, are more remarkably good, or bad, in their Flesh, according as their Food has been. The Quail in one of its Passages by *Italy*, feeding upon the Myrtle-berries, partakes
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of the strong Scent of the Myrtle, which may be easily discovered in its Flesh. The Flesh of the Mutton bred upon the Heaths in *Surrey*, is remarkably distinguished from the Flesh of Mutton bred in other Countries, which some say is occasioned by the Sheep's feeding upon wild Thyme; though that perhaps may be only a Conjecture: For I have attempted to give the wild Thyme to Sheep, and they did not receive it. It may be, however, they may feed upon some other aromatick Plant; Juniper, perhaps; or, peradventure, the wild Thyme, when it was young, might fall in the Course of their Feed. I should be glad to know from some Shepherd of Curiosity, what they have remarked in this Case. I remember a Parrot which used to eat Myrtle-Berries, and the Leaves of Myrtle, very plentifully, when he could get at them; and even after a Week, the Bird has smelt strong of Myrtle.

BUT to come to our Purpose: With regard to the Feed of Hogs, how much that contributes to the good or evil Disposition of their Flesh, I shall mention a Man at *Hoxton*, who sold Fish about the Streets for his Livelihood, kept Hogs, and fed them frequently with the stale Fish which he could not sell. The Flesh of these, when they were killed, was scented so strong of Fish, that it was disagreeable to every Body, and was of a redder Colour than that of Hogs fed in the common Way. So it is observable in the Wild-Duck which has its Liberty of Flight to Rivers, Pools, Lakes, and to

the Sea, where their principal or chief Food is Fish, their Flesh tastes strong of Fish: While, on the other Hand, Ducks of the same Breed with them, and even hatched of Eggs from the same Clutch, kept tame, and restrained from the Liberty of those we have mentioned before, are as different in their Taste and Flavour from the wild, as if they were of another Species, or as the Flesh of a Chicken is from that of a Teal or Widgeon. So in these several Ways of Feeding, we observe, that the Flesh of those Fowls or Creatures which feed altogether upon Fish, is of a redder Colour than the Flesh of those which feed upon Grain, and such Things as they can get upon the Land.

BUT let me beg Leave yet, to offer another Instance or two with respect to the changing the Bodies or Juices of Animals by Diet. Such Cows, it is well known, as feed upon Crow-Garlick, give such Milk as may easily teach us what Plant they have fed upon; it is both bitter, and of the garlick Savour. Again, when a Man eats Asparagus, his Urine immediately becomes foetid; and the eating of *Assa foetida* has an Effect as strange; and so Turpentine is as sudden and sure in its Operation. It is no Wonder then, when we kill any Creature for the Table, with its Juices so impregnated, that the Flesh should yield a Flavour agreeable to what the Body had been fed with; especially if the Food was any ways aromatick.

IF some curious Philosopher would bend his Studies to consult what Herbs or Diet could the most readily, or by Stratagem, be received as Diet, or Part of it, by those Animals which we use most frequently at our Table, I am persuaded, there is not any one Kind of Beast or Fowl, or even Fish itself, that we might not bring almost to any Flavour we desired. When I mention Fish to be brought to our Taste in this Manner, I need have little more to say, by way of Explanation of my Meaning, than to refer every Man to his own Palate. In Carp and Tench, for example, how do those of some Waters taste of Mud, while some of the same Spawn, put into clear Waters, or scowering Gravels, shall be the most agreeable that one would desire? There is an Example, likewise, in Mackarel, which are vastly different in their Flavour at the Time of their first coming in, which is about *April*, and the Time of their going out, which is in *June*. From the foregoing Arguments, I conclude, that the Reason of the great Difference of Flavour in Mackarel, as well as other Fish, proceeds from the different Food at different Times of the Year.

I SHOULD beg Pardon for this Excursion, if I did not think that the more Examples I give to confirm any Branch in Philosophy, my Endeavours will prove the more satisfactory to my Reader. But to return to the Purpose in Hand.

IN Hog's Flesh, we do not only find that one sort is more agreeable than another to the Palate, on the Account of Food; but that the Fat and Flesh is also more or less firm, as the Diet of the Hog happened to be; and that concerns the keeping of the Flesh, either when it is pickled or dried. The Astringency in Acorns, upon which Swine feed in many Places, serves to give their Flesh a Firmness which in the Drying or Pickling will preserve the Fat, or any Part, from turning rusty. This we observe is the Case of such Hogs as are fed in the Countries where Acorns are in Plenty, or as a Substitute for them, Horse-Beans are used in their fattening Food. Chesnuts are likewise very good and profitable for Hogs, where Acorns are wanting: But these are hardly common enough with us, to bestow them on our Hogs. It is a great Pity we have not more Chesnut-trees planted in *England*, considering the fine Shade they yield, their quick Growth, and the good Timber they produce. It is not indeed every where in *England* that they will bring Fruit to Perfection, as they do abroad: But I have seen such in *Devonshire* and the Western Parts of *England*: And have frequently heard, that in the Grounds belonging to an ingenious Gentleman, of the County of *Surrey*, there are ripe Chesnuts, of good Substance, every Year. And to this curious and instructive Gentleman, am I obliged, for a Discovery of what I have long endeavoured to find out, *i. e.* the Manner of feeding Hogs with the Horse-Chesnut.

Chestnut. Boil the Horse-Chestnuts in a Lye, till they are tender, and the Coverings will slip from them. By this Boiling, the Bitterness which abounds in this Sort of Chestnut, will be discharged; which will prepare them for the Use of the Hogs. Every discovery of this Nature which tends to general Improvement, is like a new Acquisition of a Country, and is what truly makes Knowledge valuable. Happy would it be if all the Gentlemen in *England* would in their Leisure Hours think of general Improvements !

BUT I do not design in this Place to treat altogether of the Food necessary for this Kind of Cattle: For I shall have Occasion by and by, to speak of the necessary Measures to be taken for fattening them. In the mean time we may observe, that in *Leicestershire*, and about *Northamptonshire*, great Quantities of Hogs are yearly fatted, and made into Bacon; which is not disagreeable to what I have observed before, concerning the Food necessary to improve those Creatures for the best Markets; those Counties, and the Counties adjacent, bringing large Quantities annually of Pease and Beans.

SOME would pretend to tell us, that we have a wild Kind of Hog in *England*, which perhaps might have been before we took the Benefit of enclosing Lands: For when all Grounds were open and free, Cattle took the Liberty of running where they pleased, and a single Mark was the only Sign
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by which a Man could distinguish his own Cattle from others. It is now almost the same Case in *Westphalia*, where the Hogs run at Random: And these may be properly said to be in a Degree of Wildness, though not strictly so wild as those in the great Forests of *France*, *Germany*, or about *Italy*; for those in *Westphalia* are something more familiar, by being partly under the Direction of a Swine Herd, and therefore do not fly or retreat from Mankind as the wilder Hogs of the Woods do. The Feed of these, both one and the other, is nearly the same, *viz.* of Acorns and other Kinds of Mafts, and other wild Fruit, and upon Truffles and Roots of Herbs. These certainly have the most delicate tasted Flesh that one can desire, but are never so fat as our bred Hogs at Home. It is not uncommon, among the wild Hogs of the Forest abroad, to see now and then, even of the wild Boars, some upwards of thirteen Hands high, notwithstanding the Females of the Swine Race are generally bigger than the Males. I would not be understood (however I may prefer the Flesh of the wild Sorts to the tame Breed) as if I would introduce the Custom of training up wild Boars in our Woods or Forests in *England*; for there are no Creatures more mischievous and vicious than the wild Hog, or are apt to do more Mischief; not even a Bear or a Wolf is a more dangerous Creatures than one of these. I would only insinuate, that the nearer the Food is to that of the wild Hogs, so much will the Flesh be bettered in the tame Sort.

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BUT let us now come to the Stocking of a Farm with these Creatures, and have some Retrospect to what I have said before of them. As for Example, the best Places to breed Quantities of them, are such as abound in Woods; the best Countries to feed them, are those where Horse-Beans and Pease are cultivated in plenty. So likewise in Farms where there are large Dairies, 'tis necessary that to each Cow there should be an Hog, for the Offals of the Dairy; such as *Skimmed Milk*, or *Flit-Milk*, *Butter-Milk*, *Whey*, and the Washing of the Dairy, which will afford them Food sufficient to nourish them, and make them profitable.

'TIS very advantagious to feed Hogs where there is an Opportunity of having continually fresh Malt Grains, so that every Brewer about *London* (or any large City) might reap an unexpected profit, by buying in Pigs of four or five Months old, and feeding them for about six or seven Weeks, to be sold then at the Market for Fattening, or putting up: For to keep them longer than that Time, and to fat them at the same Place, where Pease perhaps, or other Food necessary for their last Improvement, might be dear; that would eat up their expected Profit. In the Case I mention, I have known them bought in from Eight to Twelve Shillings a Pig, and sold out at Fourteen and Twenty Shillings a piece to the Farmers, or such as have a mind to feed them Fat, either for *Pork* or *Bacon*. So that I conclude it is the readiest and most profitable way of disposing of Malt Grains, if we have them
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in any large Quantity, and for any Continuance of time. For I judge the price of Grains as they are commonly sold, not to amount to more than three-pence per Bushel at most; which can never return him so much as he may receive from the improved Flesh of the Hogs.

W H I L E I am upon this Topick, give me leave to mention an Instance of the like Nature, or somewhat applicable, which I had from a famous Cow-keeper near *London*, who pays his Brewer 500 *l. per Annum* for his Grains, for the Use of the Cows, and 500 *l. per Annum* more, he lays out in a Farm, where he has some Grass for Pasture, some Land for *Barley* and some for *Clover*. His *Barley* he makes into Malt, which he returns to his Brewer, from whom he has the Grains. His *Clover* he makes into Hay at the proper Season; and his *Barley-Straw* with his *Clover-Hay*, serves to Winter his Cows as well as the Grains. The *Barley-Straw* and *Clover*, keeps his Cattle in good Plight of Body, while the Grains between Whiles help to increase their Milk; and I have heard say, that by this Managment he gets at least 2000 *l.* a Year clear of all expences. It is observable, likewise, that the same Person, after the Milk has been measured out to the Buyers, who are constant in taking off what he can spare, by the very Stroking of the Cows at each Meal, makes 400 *l. per Annum*, of the Butter, and near 200 *l.* a Year more, by Improvement arising by Hogs. Thus one may see the Benefit of Trade in a small Compass, and how much sooner

sooner an industrious and knowing Man may raise a Fortune, than an ignorant Man who knows no more than common Practice.

BUT let us now suppose that we are to stock our Farm with Hogs, where we have not the Advantage of Grains continually to feed them, or always the benefit of a Dairy, or else perhaps the benefit of Wood-Lands, or Mastling of them; in the Choice of our Sows for Breeding, those are accounted the best for bearing strong Pigs, which have not more than twelve Tets or Paps, or ten Paps is a good reasonable Number: For though we have mentioned some Sows that have brought Sixteen, Eighteen, or Twenty Pigs at a Fare; yet by so many, where there are even Tets or Paps enough for them, the Sow is greatly weakned and the Pigs not half nourished; besides the Sow will be a much longer Time before she will take the Boar again.

SOME Farmers are possessed of an Opinion, that every Sow has just so many Paps as she brings Pigs at a Fare; and that every Pig knows his own Pap, and sucks of that and no other: And again, that if you take away any Pig, the Pap which that Pig related to dries up; which some of the Antient Writers and *Pliny* in Particular has likewise affirmed: This I have often endeavoured to discover, but am not yet rightly satisfied of the Truth of it. Among the Observations I have made, I have remarked, that a Sow which has brought Ten Pigs,
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has had Ten apparent Paps at that time ; besides Six or Seven blind Paps as they are called, because they were not prominent as the others, or of any use : But in another Fare of Pigs, which the same Sow brought a Year after, consisting of about Fifteen, she had as many Tets or Paps as she had Pigs. It would be worth While for the curious Enquirers into Nature, where there is an Opportunity, to remark some particular Pigs, whether they constantly kept to the same Paps ; and if they did so, whether when a Pig was taken away, the Pap it belonged to would dry up. However, this I am sure of, that the smaller the Number of Pigs the better they will be nourished, and the larger they will be when they are full grown.

IT is a common Saying, that the worst Housewife will rear the best Pigs, which I suppose arises from the common Supposition, that a Hog is a Creature which delights in Dirt and Filth; according as *Varro*, and some other of the Antient Writers would insinuate. But I have good Reason to judge that Swine are very cleanly Creatures in their disposition : For notwithstanding we find them frequently lying down in miry Places, and in Bogs and such like : It is, in the first place, to cool their Bodies ; as no Creature in the World is hotter in its Constitution than Swine : And again as Swine are often vexed, or troubled with Ticks or Lice, so the rowling or covering their Bodies with Dirt, as soon as it is dry and they can rub it off, takes away those Vermine. Another Proof
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of their Cleanliness, is, that they will never Fatten if they are penned up in so close a Sty, that they are obliged to lye down in their own Dung. Therefore all Sties that are made for these Creatures should have open Courts before them, for the better Conveniency of their Airing themselves, and for the more commodious giving them clean Straw or Litter to lye upon. The finest Pigs that ever I have seen reared, were managed in this cleanly Manner. So that I would advise who ever has a Fare of Pigs, to keep the Sow well littered with clean Straw; since it appears that Cleanliness does them, in great Measure, as much good as their Meat.

I cannot help observing (*en passant*,) what the antient Writers say of the Heat natural to the Bodies of Hogs; namely, that when a Wolf has caught a Hog, he immediately drags her to the Water, because as they suppose his Teeth are not able to abide the Heat in the Flesh of Swine. But I give it from antient Writings; I am not able my self to determine whether their Bodies are yet so hot as that comes to. However, we have so far an Instance of the great Heat of their Bodies, that they will fatten much better and quicker in cool and moist Woods, and in shady Places where little Food can be discovered, than in hot open Exposures where they have Plenty of Food given them, and have not the trouble of seeking for it. Moreover it is observable that whatever Food or Diet is cooling to their Bodies, is profitable to them; while on the

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contrary,

contrary, all Diet of a hot Nature, is disagreeable to their natural Disposition.

THIS natural Heat in the Body of Swine, makes it also necessary that they should have always free Access to Water.

IN the Choice of a Herd of Swine, one Boar may be allowed to ten Sows, and not more, if you design the Breed to be strong. Likewise, the Sows for Breeding should be of different Ages, in order to have sucking Pigs for the Market all the Year round. A Sow, from the Time of being served by the Boar, to the Delivery of her Fare of Pigs, goes about sixteen or seventeen Weeks, most commonly farrowing in the seventeenth Week; and if they are kept clean, and well fed, will bring three Fares of Pigs in a Year. By which Means, they prove of more Advantage to a Farmer, than many other of his Cattle, whether they are sold as sucking Pigs in the Market, which is the most profitable Way, or reared for Feeding or Breeding. The Boar ought to be full a Year old before we suffer him to couple; though at half a Year they are capable of serving a Sow: And the Sow ought not to be younger than a Year when she is suffered to take the Boar; and she will breed seven Years after, unless she happens to have too great a Number of Pigs at a Fare: As that is, so will she be fruitful a longer or shorter Term of her Life. From the Number of Pigs which she produces at her first time of Farrowing, one may be able to judge

judge how many she will bring at each Fare afterwards, or near the Matter.

ALTHOUGH I have observed that a Sow will bring three Farrows in a Year, yet it is not always necessary to suffer them at every breaming Time (according to some Farmers) to take the Boar; because, if they bring a great Number of Pigs, three Broods in a Year would weaken them too much; and consequently the Pigs themselves would be weaker, and require a greater and larger Share of Nourishment to bring them forward, than others that are strong at their first farrowing, or shall then have the Benefit of being suckled by a Dam in full Strength.

SOME Farmers judge, that the best breaming Time is from *November* till the End of *March*, or Beginning of *April*; so that you will have Pigs farrowed at the best Seasons, either for killing as sucking Pigs, or for shock Pigs, *i. e.* such as will be fit to turn in upon the Stubbles after Harvest to rear. Though a Sow may be with Pig at the first Breaming, as it is almost constant, the more prudent Farmers suffer her to keep Company with the Boar for some time afterwards, to prevent, as they say, the casting of her Pigs before the time. It is likewise necessary to keep a young Sow in her first Pregnancy, from common Insults from Dogs, or being too much hurried: For I have known a young pregnant Sow slip her Pigs after three Months, by being only coursed by a Dog, and

some others, that have brought many good Litters, which have been pinched by the Ear by Dogs, at different Periods of their Pregnancy, that have cast their Pigs, and the Life of the Sow her self has been endangered.

THERE is an Observation of *Varro*, that is not disagreeable to what I say concerning the suffering of a Sow to breed but twice a Year : for as she brings forth her Young in the seventeenth Week, he would allow her about two Months to feed them before they are to shift for themselves, which will make up what we have said concerning the Breaming of a Sow twice a Year, to rear strong Pigs.

· IT is remarkable, that a Sow in few Days after she has pigged, provided she is well fed, will seek the Boar ; and if she is suffered to be served by him, it will be no Difficulty to conceive how she may bring forth three Litters in a Year ; notwithstanding that from the breaming Time to her Delivery of every Fare, is upwards of sixteen Weeks, which will make forty-eight, out of the fifty-two Weeks, &c. in the Year.

SOME young Sows, at their first Farrowing, are subject to eat their Pigs, and should therefore be watched carefully when their Time of Pregnancy is out. To prevent which, feed the Sow very well for two or three Days before her expected Time of Farrowing, which is the most ready and certain
Way

Way of preventing it. But if that Care has not been taken, then as soon as any of the Pigs are farrowed, wash the Backs of the Pigs with a Sponge dipped in an Infusion of Aloes and Water warmed, which will prevent her from destroying them.

I HAVE touched, in the foregoing Paragraphs, upon the Necessity of feeding a Sow plentifully when she has Pigs, that she may give the Pigs better Nourishment: And it will not be out of the Way to remind my Reader at this time, how much to her's and the Pig's Advantage it will be, to keep her clean in her Bed. It will be advantagious to the Owner, likewise, to help the Sow, by feeding the Pigs with warm Milk now and then, with a little coarse Sugar in it, as soon as they may conveniently be brought to take it; especially if the Sow has brought a great Number: and then also to sell off, what we think convenient, to the Market, as sucking Pigs, to strengthen the rest. But this Manner of feeding Pigs, is to be done where there is a Dairy, otherwise the Milk would be too valuable, or amount to too great an Expence.

THE best Time for killing of sucking Pigs, and when they are first accounted wholesome, is, when they are three Weeks old, and the others that remain for Breed, will begin to follow the Sow, and to shift for themselves. If the Sow is very large, and in good Plight, one ought to give her Room enough, either in the Stye, or House, where the

Pigs are kept, to prevent her Over-laying them ; and at her coming in from feeding, to take care that she does not fall down upon the Pigs: which however she may, by natural Instinct or whatever one may call it, observe of her own accord ; yet sometimes I have known two or three Pigs destroyed, by either the Sow's lying down too hastily, or the Over-wantonness or Over-hastiness of the Pig's endeavouring to get at the Pap.

WHEN I observed above that a Sow sometimes brings twenty Pigs at a Fare, it is to be supposed, according to the old Notion, that the Sow ought to have as many Paps as Pigs ; for, agreeable to the Sentiments of the Ancients, if there were not as many Paps as Pigs, some of the Pigs must die ; *i. e.* if every Pig was naturally confined to its Pap, and no other, such a Production must be unnatural. It is a strange Account that we have from *Æneas Lavinius*, of a Sow that farrowed thirty Pigs at one time, as *Varro* observes ; but we find no Sow in our Times that has near that Number of Tets or Paps.

WE must remark likewise, that when we have several Sows which may happen to farrow about the same time, to put them into different Sties or Houses ; otherwise they will destroy the Pigs of one another.

ONE Thing which is of great Nourishment to a Sow when she has brought a Fare of Pigs, is
Barley

Barley made soft in Water, which is a cooling Diet, and strengthens the Body ; or if at that time Barley is broken, or half ground, and sodden in Water, it will still be of more Advantage to her and her Pigs. But where Provision is wanting when a Sow has farrowed, whether Wash, Grains, Whey, or such Things as we have mentioned, it is best, to preserve the Strength of the Sow by selling all the Pigs at the best Market, as Sucklings, as soon as Convenience will allow, which will make her sooner fit for the Boar.

WE may observe, that as no Creature is generally so voracious as an Hog, so a Sow that has Pigs, is the most mischievous Creature that we know. It has, besides its own natural Disposition to Gluttony, a Wantonness which induces it to prey upon every Thing which falls in its Way, or it can get within its Power. We see its ill Nature, in its Disposition to prey upon its own Pigs ; and it would even be well if its voracious Appetite would end there. But what melancholy Instances have we had of the Mischief done by Sows that had Pigs, in the wounding, and even in the eating of little Children, where there has not been due Care taken of them ? I could mention several Cases of this Nature. Some are now living, who wear the Marks of their savage Inclination ; and others who mourn the Loss of a Child. However this Paragraph may be thought out of the way by some People, I think it no Imprudence to insert it, to prevent for the future such Mischiefs. We must consider, that

at first all Hogs were wild ; and we know, how tame soever, they are the most voracious Creatures : But though they have a Spirit equal to Tygers, Bears, or Wolves, the Way to civilize them, is to feed them well, and keep them in Plenty of Victuals ; for, I have experienced in a Tyger, which I was very familiar with, that he never attempted any Thing in the savage way, or endeavoured to insult his Keeper, or the Persons about him , but when he wanted his common Subsistence, or convenient Nourishment.

REMEMBER particularly, when a Sow has Pigs, to let her have Water ; although we allow her Plenty of Milk, or the best Wash from the Dairy, it is the Way to keep her from doing Harm.

WHEN we first have a Mind to wean our Pigs from the Sow, let them be fed at Intervals, during the Sow's Absence, with the best Milk we can spare from the Dairy ; which, though we begin with it warm at first, we may at the three Weeks End give it them cold, if we design to rear them : And they may then, or at a Month at farthest, either be fed alone, or keep Company with the Sow abroad.

WHEN a Boar has past his fifth Year, it is advisable to geld him, in order for Putting up for Brawn ; for then he is no longer esteemed fit for Generation : His Flesh then is not too hard, and his Skin is most naturally inclined to be brawney,

ney. However, if he is gelt, he will then make good Bacon.

A Sow may breed till she is six Years old. Some Farmers, indeed, would allow her seven Years before she is put up to fatten ; but I am of the contrary Opinion : For she never receives her Food well, or can make good Flesh, unless she is strong in Body, and has taken the Boar some time before she is put up : for otherwise she would pine, and her Meat would be of no Nourishment to her. The Reason that induces me to be so particular in this Case, is, because I have known a Sow, that has been put up to fatten for Bacon without this Precaution, which after three Weeks good feed, has broke loose from her Sty, and gone to the Boar ; which has been almost so much Loss of Meat and Time to the Feeder. It is also necessary, that when Hogs are put up to fatten, they should be kept out of the Cry or Grunt of other Hogs : for otherwise, upon the first Confinement, notwithstanding the extraordinary Plenty of Diet which is given them, they will pine, and decline in their Flesh. This should be particularly observed in putting up Boars in *Franks* for Brawn ; for they will be fullen and not feed, if they are within the Reach of the Sound of any Hog ; nor, according to what I have said before concerning the Cleanliness of an Hog, would a Boar which is put up for Brawn, (though you use the utmost of your Endeavours) be ever good for any thing, after he is once inclosed in a *Frank*, if it was not for the due Regard there is had

had in that Machine, of taking away his Dung every Day. Neither is that Dung of small Value. I have known some Farmers give half a Crown for a Cart-Load of it, and have accounted the Price cheap ; for Hogs Dung, as it is esteemed of a very hot Nature, they lay it upon such Lands as they think are naturally cold, in such a Proportion that one Load of this has been reckoned worth three or four Loads of Horse-Dung. And it is not unlikely, that in the fattening or brawning of an Hog, reckoning Litter and all, one Hog may yield a Load and Half, which may help towards the Expence of the Feed of the Hog. But what I have said in some of my former Writings, relating to Hogs-Dung, may further explain what is not necessary to repeat.

THERE is one Thing to be observed by those who breed and feed Swine, which is, that they do not suffer them to feed too rashly, or to give them any extraordinary Plenty before they put them up ; but a moderate Diet, such as will keep them in a good State of Body, and prevent them from being over-ravenous. Besides, breeding Sows, if they are fat, their Lives are endangered at the time of their farrowing. It is also advisable for those who keep any Number of Swine, to give them a Feeding every Morning and Evening, letting them range in the Day-time to seek their Food, which they cannot want if there are any Herbs or Grass to be found in Lanes or waste Grounds, where they may go : For there is hardly an Herb
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or Root that is disagreeable to them ; unless it be Grass it self where it happens to be fresh, and in great Plenty, especially about the Spring of the Year ; and where they are left at Liberty to feed upon that, it will certainly give them the Gargut.

IN Harvest-time they must be carefully yoked and ringed, to keep them from breaking through Hedges and Fences, to get at the Corn ; for in a short time they may do as much Mischief as they are worth.

DURING the Time of the Growth of these Creatures before we come to feed them, either for Porkers, or fatten them for Bacon, if Wash or Swill is wanting, we may substitute in its Room, as good a Food made of Graves (which are the Offals of the Tallow-Chandlers) and Water ; but this is only to help them till about a Month before we design them for Pork, or what they call green Bacon, which is Pork for pickling.

I HAVE more than once observed the Necessity of keeping Hogs from too great Plenty of fresh Grass ; they generally appear heavy, hanging down their Heads, and staggering, after four or five Days plentiful feeding in Spring Grass, and rarely live above a Day or two after they are attacked in that way. I had the Curiosity to have one opened that died by this Distemper, and upon examining his Paunch, I found it extreamly full of common
Grass

Grafs only, and the larger Guts were full of Blood, and greatly inflamed. But I fhall fpeak by and by of what relates more particularly to this Diftemper, and its Cure.

WHEN the Sow paffes her Time of Breaming, or if ſhe does not ſeem inclinable to take the Boar, give her ſome parched Oats in her Swill, or Morning and Evening's Food; or, according to ſome good Houſewives, the ſmall End of a Rennet-Bag will excite her to receive the Boar.

WHEN we have choſen the beſt of our Pigs for Rearing, and pitched upon ſuch as we deſign for Boars and Sows for Breeding, of the others, the Males muſt be gelt, and the Females ſpayed; the Females then are called Spayed Gelts: Theſe being thus caſtrated, will be fit firſt for the Butcher to kill for Pork.

THE beſt Time of killing an Hog for Pork or green Bacon, is at full half Year, or at moſt, nine Months old; the Hogs Fleſh of this Age, will eat tender, ſweet, white, and full of Gravy. If it be uſed as Pork, or if it is pickled, as I ſhall inform my Reader by and by how to do, it will excel even the *Westphalia* Bacon, or any Thing I have eaten of the pickle Pork. But it is neceſſary to take Notice of the Food which ſuch Hogs ought to have a Month or five Weeks before their killing.

IF we design an Hog to be put up for a Porker only, we may feed him in the following Manner; *viz.* with Raspings of Bread, which we may have from any great Baker in *London*, at about 9 *d.* or 10 *d.* *per* Strike, which is a Bushel Measure filled only to the Edges: So that whereas eight heaped Bushels make one Quarter, sixteen of these make the same Measure. These Raspings may be soaked in Water, and given plentifully to such Hogs as we design to fatten for Porkers. But as it is a soft Food, we may in the first Week of putting up the Hogs, add to every Bushel about a Peck of Horse-beans, broken a little in a Mill. And if we have a Mind to make the Flesh and Fat yet more firm, we may sprinkle into the Meat made of the Raspings, a small Quantity at a time of Oak-bark, finely ground.

ANOTHER Way of feeding Swine for Pork to be used fresh in the Kitchen, is with Barley-Meal, to be tempered with Water till it is of the Consistence of Mortar used by Bricklayers. About twelve Bushels of Barley thus made into Meal, will fat an Hog, as well as sixteen Strike Bushels of Pease, and make his Fat as firm as Pease will do. But when I talk of this great Quantity for one Hog, I mean, that it is enough to fat one of full Growth, even of the largest Kind, for Bacon. The Proportion to fit him for pickle Pork, need not be half so much, or less, as People fancy the Fatness of a Hog should be, either for fresh Pork,
or

or Pickle-Pork. One might almost come to a Certainty of the Degree of Fatness of any Hog upon his Feed, while he is living, if we weighed him at the first Putting up, and every Week afterwards, till he is killed ; we might then see by him when he comes to be cut out, what Degree of Fat he has gained by his Food, and proportion the Food of every Hog afterwards accordingly.

ANOTHER Way, which is what I most admire, and have recommended, with Regard to fattening a Hog for pickle Pork, is to give him about three Pints a Day of Horse-beans, with his common Meat, for a Week, before we put him up ; and then we must be sure that he never want either Meat or Water, and is well bedded with clean Straw or Pease Haulm, which must be shifted frequently for the Reasons above-mentioned. At the first of his being penned up, he will eat about three Quarters of a Peck in a Day, and by Degrees, as he grows fatter, his Appetite will decline. About three Bushels of Pease, or four, at most, if he be of the larger Breed, will fit him for killing, without making him too fat. In this Condition, his Flesh will take Salt much better than by any other Food, or at any other Age.

A C O R N S, where they can be had, are yet preferable to Horse Beans, and may be used in such Quantities as I have directed above, in the Week before the Hog is shut up in the Sty.

I cannot help observing, that where we have a Mind to make the Fat of these Creatures firm, the more Acorns we give them the firmer it will be; as the Nature of the Acorn is astringent, so likewise the Bark of the Oak, which I have mentioned before, will help in that way. Chestnuts are likewise much of the same Nature, and are nourishing also like the Acorns. So Horse-Beans have the same Quality, but are rather too hot to be given in Abundance. Pease are good to nourish and bind the Fat of these Animals. Barley is very good; and the softer Food among these is the Raspings of Bread. So that if we want any one of these particulars, my Reader may better guess how to regulate the Food of an Hog, and bring his Flesh and Fat to his own Taste.

FOR Green Bacon or Pickle-Pork which is all one, I judge it the best to scald the Hogs.

WHEN the Hog is killed and drest, let him hang up about 24 hours before he is cut out, if we design him for Pickle-Pork, and then cut him into such Pieces as you think proper; sprinkle upon them a little common Salt, which will draw out the more bloody juices from the Flesh, and occasion the Flesh to receive the Salts, which we are to use afterwards, with great facility, and by that caution will make the Pork keep the longer.

I F the Hog is of a large Size, it is thought advisable to take out the Bones ; because when the Flesh is gross, the Meat will be apt to taint or grow musty where the Bones join to it.

I F your Hog weighs about 21 Stone after Dressing, mix the following Ingredients well together in an Iron Pan, which must be set over a Fire till they are very Hot, *viz.* Three Quarters of a peck of common Salt, Six Ounces of Salt Peter or Nitre, one Pound and a half of Peter Salt, and three Quarters of a Pound of coarse Sugar ; rub this Mixture upon your several Pieces of Pork while it is hot, and grudge no Labour in doing it ; for by this means the Salts will be made to penetrate the better into the Flesh, and make it the sooner ready for Eating. Sometimes I have known a whole Hog spoiled for Want of a little Labour used in the Salting it.

W H E N the several Pieces are sufficiently rubbed in the Salts as I have directed, lay them close together in glazed Earthen Vessels, turning them every other Day for a Fortnight, and rubbing them each time well with common Salt ; but during all this Time, except at the Intervals when we turn them and give them fresh Saltings, keep the Pans close covered. It is necessary likewise to change the Pieces which were at the Bottom of the Pans to the Top, in order to have them all equally pickled.

IN ten Days or a Fortnight after this management, if all your Pieces do not feel hard, it is a Sign they want Salt and good Rubbing, and must be rubbed a fresh with Salt; for the Stubbornness of the Flesh, is the surest Sign of its being well cured. When I speak of this Length of Time, I suppose the Pieces to weigh about 4 or at most 5 Pounds each, if they are larger we may double the Quantity of Sugar, and they will require a longer Time before they are cured, and consequently more Trouble in shifting of them. Nay, a Gentleman who has tryed this Method, has used double the Quantity of Sugar that I have mentioned in the Receipt above. And he tells me, that it has still a better Effect than the Quantity I have prescribed, although his Pieces were not above four Pounds each.

IT is certain however, that of all the Pickle-Porks I have eat, or all the most admired Bacons of Europe, no Flesh is shorter or finer than the Pork prepared this way, or is the fat firmer or of a more agreeable Colour in any than we find it in this.

SOME perhaps may be desirous to know the common Value of Pigs three Quarters grown, when they are sent to Market in order for Porkers. A Pig of three Quarters old, bears the Character in the Farmer's Phrase of a young Shoot, and is commonly sold in *Essex* (if it is tollerable in Flesh) for about Fifteen or Sixteen Shillings, that is, pro-

vided the Butcher can sell it as Pork in the Market. But I do not understand by the Price I have mentioned, that one of these Hogs or Shoots has been so expensively fed as the last I have mentioned for Pickle Pork; but that they have a reasonable Share of Flesh and Fat upon their Backs, such as the Higglers bring ready killed and dressed to *Leaden-Hall-Market*, which is accounted to carry a flesh superiour in Quality to that of Hogs of a larger Size, fed and killed about *London*. A noted Man in this Way tells me, that the Buyer of one of these Pigs in the Market, gets no more when he brings it to *London*, than the Advantage of what the Country calls the fifth Quarter. This fifth Quarter, as they call it, consists of the Head, the Ears, the Feet, the Inwards, and the Sticking, with some Leaves of Fat, all which together makes the Amount as they say of their advantage. And thus much I shall only say of Porkers, and such young Shoots or Hogs as are killed for Pickling.

BUT we shall now speak of such Hogs as are proper or most commonly fed for Bacon. In *Hertfordshire* and the north Part of *Essex*, where the large Breed of Hogs generally prevails, they account a Hog of thirty Shillings Price is of a good Size to put to fatten for Bacon. Pease there is the favourite Food, and I have known some Farmers allow Twelve, Fourteen, and sometimes Sixteen Bushels of Gray Pease, for the Fattening of an Hog; and there have been Hogs in those Counties, when
they

they have been full fat for Bacon, have been sold at Five, Six, and even Seven Pounds a piece.

PEASE for fattening of Hogs in those Countries, are most commonly sold after the Rate of 2 s. *per* Strike Bushel, and sometimes more; but in a dear Year, rather than buy Pease at the Market, they barter with one another, Hogs for Pease, and Pease for Hogs; or one Commodity for another, as their Conveniency may serve them best. This is one of the grand Secrets in Farming, and if three or four Farmers of Reputation and Substance were to agree heartily with one another, in the same Neighbourhood, or within eight or ten Miles any way of the same Spot, they might every one be greater Gainers than they are, by bartering one Thing for another, as Occasion should offer to any one of them. For besides the Disadvantage of expending ready Money at some Times *per* Force, when the Necessities of the Farm may immediately want it; the Expence and Trouble of the Teams going out to Markets at remote Distances, through bad Ways, (perhaps) and, it may be, to sell their Corn at a low Price; this Way of Barter one with another, may prevent many Difficulties which frequently happen, and give some Farmers Opportunities of thinking and consulting more sedately, of the necessary Business relating to the Improvement of their Farms. For there is nothing requires more Philosophy and Quiet, than the Business of Farming. It is necessary, however, that a Farmer

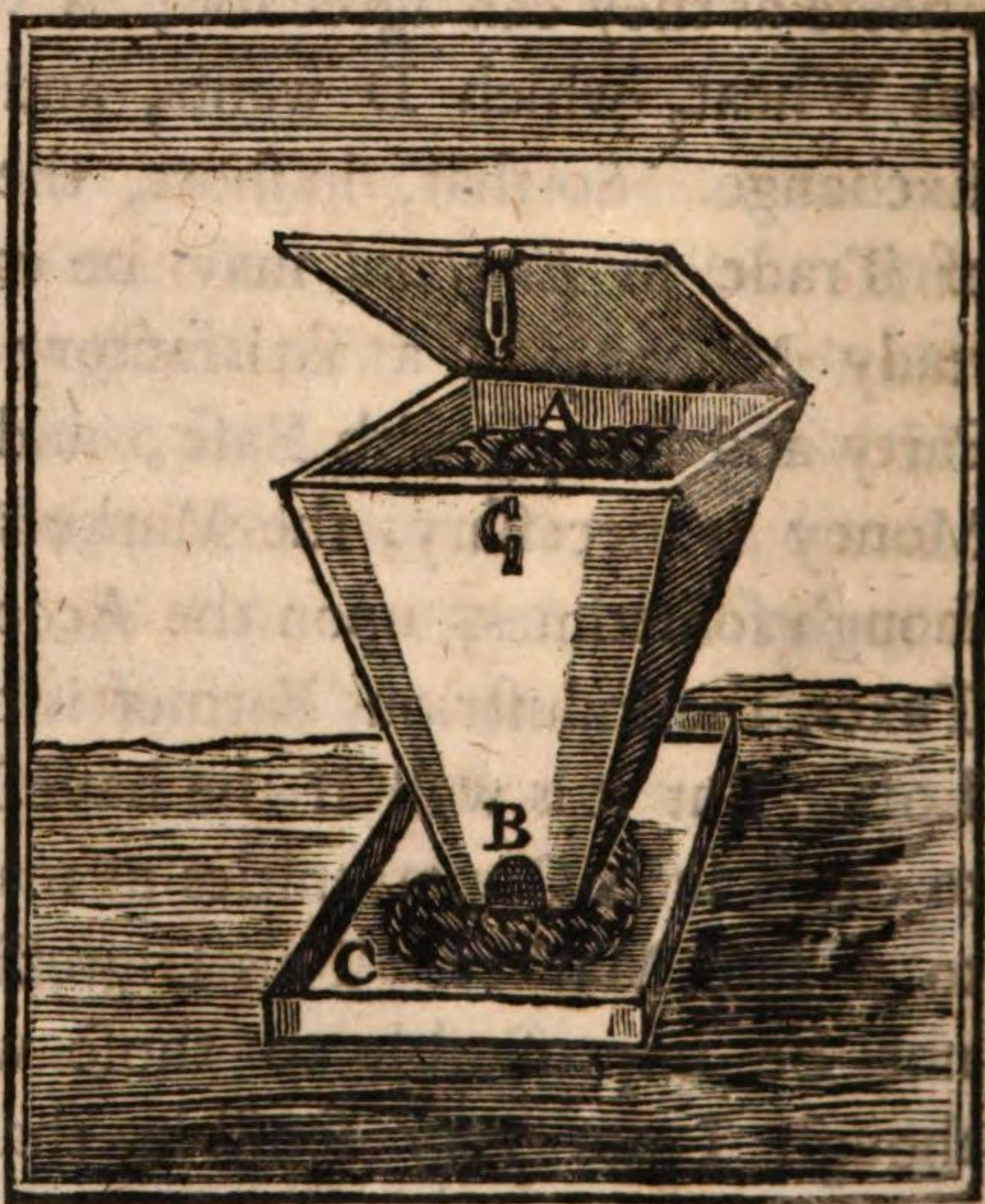
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should

should frequently visit the Markets, to know the politick Methods that are transacted there : But as it is much easier riding a single Horse, than carrying a heavy Load with a Team, the Wear and Tear of them may be saved, rather than run the Hazard of a bad Market. Nor, in the Case of Cattle, does the driving them to Market always prove so successful as we desire. To give a short Example of the Benefit of Bartering, which may arise to Farmers who reside within ten or twelve Miles of one another ; I suppose that A has a Parcel of Hogs more than he can feed for Bacon, or sell as Porkers, without Loss ; and, at the same Time, he has not in his Barns, of Pease, or such other Corn, or Grain, a Quantity sufficient to feed these Hogs, so as to render them fully advantageous to him : The first Thing he would be apt to conclude upon, would be, to sell a Parcel of his Hogs at the next Market, though at a low Price ; considering, that though he could buy Pease or other Necessaries for their Feed, at the next good Market, which perhaps may not be above seven or eight Miles off ; yet the Expence of sending his Waggon and Horses thither, to bring home the Provender, besides the Loss of a Day's Work of his Servants, that take Care of the Waggon, and drive his Hogs, would prove of great Loss to him. But he's acquainted with B, in the Neighbourhood, and barter some of his Hogs for some of his Pease, and both of them make their Advantage by the Barter, without any immediate Expence.

Expenditure. Again, B is in Want of Wheat, and the neighbouring Farmer C, has Wheat, who may want Hogs: Then B barter Hogs for Wheat, or any other Commodity that C has; for it is all one in Point of Barter, whatever the Subjects are, provided the Price of each Commodity is first agreed upon, between the bartering or interchanging Parties. It may, peradventure, happen, that C, a Farmer in D's Neighbourhood, may want some Hogs, and has more Sheep than he can well feed; D then barter Sheep for Hogs with C, it is no Matter whether they are fatted, or alive, or are already made into Bacon, so long as they are worth as much as they were bartered for: This Bacon, D exchanges with a Cheese-Factor, for as much Cheese as they can agree for; A wants Cheese, but has Wheat, which D wants, and they make an Exchange. So that, in short, the greatest Branch of Trade in *England* may be carried on without ready Money, in a satisfactory Way, between Party and Party, with Ease; and when the ready Money is necessary, the Markets are always open, though sometimes, upon the Account of Rent and Taxes, the industrious Farmer is obliged to sell for Loss. But it is well if he have Foresight enough to catch such Opportunities as may bring his Hogs to a fair Market. This Digression, I hope, will not be unprofitable to those who read it: For though I am very sensible that there are many Farmers in *England* who do not want this Advice; yet I am sure there are many others who have been great Sufferers for the want of such Instructions.

BUT to return to my Subject, *viz.* The Feeding and Fattening of Hogs for Bacon. The Hogs which we put up for Bacon, being generally older than those we feed for Porkers, or for killing with a Design for Pickling, they will be brought with more difficulty to feed in the Styer than the younger Hogs; therefore the Day before we put them up we must keep them scant of Victuals. Their Styer as I have before observed must be as clean as it can be made, and well bedded. They will at first however good their Meat may be whether Pease or any other Sort, be apt to toss it out of their feeding Trough, either out of Wantonness or ill Nature; to prevent which I have contrived a Means of giving them their meat no faster than they desire to eat it, as I shall explain by the Figure. A represents the Mouth or opening of a Cone-like Box or Binn, with the broader End upwards, into which we pour their Meat. At the lower End B it will fall by degrees



into a Trough or Receiver of Wood C, where the Hog may eat it as it falls, without being capable of spoiling any of it, or wasting it. The
Trough

Trough C, and B or Binn, as I call it, may be made to hold a Bushel, and B must be covered at Top, closely barred or locked down to prevent the Hogs breaking into it: the Trough should be about two Foot and a half Square, and the *Binn* may be as broad at the Top, ending narrow at the bottom as the Figure directs.

By feeding Hogs in this manner, there will be one Advantage more than by the common way; which is that the Fat of their Hog, although it will not encrease, it may be, so fast as in the ordinary Way of feeding, yet it will be more firm and less Subject to turn rusty; for it is observable that all Swine whom they feed at their full Will, in their gluttonous manner, will indeed grow quickly fat; but their Fat will be only Spungey for want of a sufficient Time for the Digestion of their Meat; but especially I would recommend this way in feeding Hogs for Brawn.

SUPPOSING the Hogs to be well fed according to the foregoing Directions, and fitted for Bacon, which may be made to abound in fat more or less as their Allowance of Food happens to be; we are next to take notice of the most approved Methods for Curing of Bacon.

It is to be observed, that there are two ways of dressing a Hog for Bacon; one of them is to scald it, and the other is to singe it. For my own part, I admire that which is scalded, because the

Skin is less rough than that of the singed Hog; and I am apt to think that the Salts we use in the Curing of the Flesh will penetrate more easily the scalded Skin than the singed Skin; and moreover that the scalded Skin will be more tender than the other, when it may happen to be eaten, as many like to do.

If we scald our Hogs, as they generally do abroad and in some Counties of *England*, the common Pickle for Pork, as recommended above for pickled Pork (or something like it) is the best Way of preparing it for Drying. This Way is what is generally practised in making of Hams, which after five or six Weeks seasoning in the Pickle, may either be hung up in a Chimney where Wood or Saw-dust is burnt; or if neither can be had at an easy Rate, then *Newcastle* or other Pitt Coal may do: But the Smoak of Wood is preferable in my Opinion, because the Flesh will be of a much finer Flavour, and more tender than it will be by the Cole Smoak. And besides it should be observed, that the more gentle and constant the Fire is that we use for drying of Bacon, so much the better, and more equally will our Bacon be cured. For want of this Precaution, I have sometimes known Bacon grow rusty before it has been half *made*; and other Times I have met with it red half through, and green in the Middle, which is a Sign of wrong Management. It is a Rule, that whatever is red in the Flesh of Bacon, is fully cured; red;

red ; and what is not of that Colour, is subject to Decay.

To proceed in this Form of Management, I shall give my Reader a particular Account of the Methods used in *Westphalia*, *Hamburg*, *Norway*, and other curious Bacon-Countries, of preparing their Hams by Smoking-Lofts, or Closets, joining to the Funnels of their Chimneys, in Garrets, or other remote Places from the Fire ; from whence it will appear, that the Smoke is principally the Means of curing Bacon : For as in those Countries it is their Manner to keep their Drying-Bacon very remote from the Fire, and out of the Heat of it, so are we as sensible of the good Effect which attends their Practice. Their Bacon is more tender and esteemed to be of a higher and richer Flavour than that made in any other Parts of *Europe* ; and yet the Bacon of those Parts is salted, for the Generality, with no other than common Salt, such as is made at *Newcastle* and *St. Ubes*. But it is the Custom of the Foreigners we speak of, to use but a small Share of Salt, to what we do in *England*, relying, chiefly, upon the Smoke, for curing their Bacon ; while, on the other Hand, our Farmers in *England*, for the most part, depend on the Quantity of Salt, and imagine that will secure it from the Over-heat of the Fire they give it in drying. But as it is our common Method to have our Bacon hung up to dry too near the Fire, it commonly turns rusty in a few Days.

I AM

I AM obliged to Mr. *John Warner*, a very ingenious Gentleman of *Rotherbith*, for the first *just Account* of preparing Bacon in the *Westphalia* Manner, and from whose Letter to me, I have already communicated to the Publick the Principles of the Art; since which, my learned and curious Friend, Dr. *Corbet* of *Bourn-Place* near *Canterbury*, has built a Bacon-House capable of drying (as I am informed) sixty large Hogs at one Time, and has even improved upon the *Westphalia* Method, *viz.* by drying so large a Quantity by one Fire, when the Drying-Rooms or Closets abroad do not cure, perhaps, above five or six Hogs at a Time. It is, however, in the Power of most Farmers, to make Smoke, or Drying-Closets, in their Garrets, sufficient to cure Bacon for their own Families, if they can allow such a Part of their upper Story for that Use, as joins with some Funnel of their great Chimney, where the most constant Fire is kept; observing, when they make such a Closet, that it be as close as possible, so that when we let in the Smoke from the Chimney, none of it may escape.

THE Manner of letting in the Smoke, must be through an Hole, from the Chimney, near the Floor of the Drying-Room, which must be guarded or governed by a Register of Iron, which at Pleasure may be opened or shut, either to let the Smoke pass up the Chimney without Interruption, or turned altogether into the Bacon-Room, when it is necessary. Near the Cieling, as I have
hinted

hinted above, there should be another Hole in the Chimney, governed by a Register of Iron, to let out the Smoke in such Quantity as we please; or being shut with the other below, may let the Smoke pass with Freedom up the Chimney Funnel, as it may be thought necessary.

It is proper, that in the making of these Registers, the Handles of them should be *without* the Closet, to turn them to what Degree we please, without entering the Smoke-Room; and we must take Care that our Drying-Flesh should be hung up in such a Manner, that one Piece may not touch another, but so as to receive the Smoke equally on every Side. These Places, as they are remote from the Fire, and are pretty constantly fed with Smoke, bring the Flesh to such a State, that it will not be subject afterwards to Putrefaction.

I HAVE now mentioned what I think necessary concerning the Breeding and Feeding of Swine to the best Advantage, as well as given Directions for rendering their Flesh profitable; and I doubt not but it will appear, that Swine well managed, will be well worthy the Place I have given them in this Treatise of Cattle, where I place them even before Cows or Horses: For, as Mr. *Fitzherbert* has observed, they require the least Care, and bring as much Profit, as any Kind of Beast whatever. His Words are, speaking of Swine, as follow;

Now

Now thou husbände that hast both horses
 and mares, beastes, and shepe. It were ne-
 cessary also that thou haue both swyne and
 bees, for it is an olde sayenge, he that
 hath bothe shepe, swyne and bees, slepe
 he, wake he, he maye thryue. And that
 sayenge is bycause that they be those
 thynges that most profyte yfseth in shor-
 test space with the lest cost. Then se
 how many swine thou arte able to kepe,
 let them be bores and sowes al and no
 hogs. And if thou be able to reyre fire
 pigges a yere then let tow of them be
 bores, and iiii. of them sowes, and so to
 contynue after the rate. For a bore wyl
 haue as litle keping as a hog and is
 much better then a hog, and more meate
 on hym, and is redy at al tymes to eate
 in the winter selson, and to be layde in
 sowse. And a sowe or she be able to kil,
 shal bring forth as many pigges or mo as
 she is worth, and her body is neuer the
 worse, and wyl be as good bakon as a hog
 and as lytle keepyng but at such tyme as
 she hath pyges. And yf thy sowe haue mo
 pigges then thou wylt reyre, sel them or eat
 them, and reyre those pyges that come about
 lent time, specially the beginning of somer for
 they can nat be reyled in wynter for colde
 without great cost.

THE last Article of our Author, where he speaks
 of the Beginning of Summer as a proper Time for
 Rearing

Rearing of Swine, may be supposed to go as far as the End of *June*, or the Beginning of *July*: For we are sensible, that in *Hartfordshire* and *Essex*, the Pigs farrowed about those Times, improve extremely by being turned into the Stubbles, and from thence into the Woods, at the Mast Season. These they call Shock-Pigs, or Shott-Pigs. We may, besides, observe, upon what Mr. *Fitzherbert* has said in the foregoing Paragraph, that the Swine of our Times are not, perhaps, so tender, as the Swine in his Days: For, as it is in other Cases, as well Animals as Vegetables, whatever is the Produce of the warmer Climates, though they may be under some Restraint at their first coming to us, on Account of our hard Winters, yet the Offspring of these will be more hardy than their Dams or Sires, and so from Generation to Generation, every one will become more naturalized to the Country.

A GENTLEMAN of great Veracity, and a curious Observer of Nature's Works, remembers when Pease were only raised upon Hot-Beds, and that within fifty Years last past. Our hardest Sort of Beans have not so long been ventured abroad in the Winter; but the Seeds of the first growing more hardy, from Time to Time, or from one Production to another, we now make no Difficulty of even planting them, and exposing their first tender Shoot to the most severe Frost in our Winters. So that it is no Wonder, from these, and many more common Examples of the like Nature, that the Bantam-Hogs, and the *African* Hogs, from
whence

whence those of *Harfordshire* are derived, are now so familiar with us, and so well resist the Rigour of our Winters.

LET us now speak of the Diseases in Swine, and the Cure of them.

Some Rules to know when a Swine is in Health.

IT is remarkable, that all Swine in vigorous Health curl their Tails, for which Reason, the best Swineherds will by no Means suffer them to be blooded in that Part, but in the Ears, and about the Neck, when Bleeding is necessary. They are very subject to Fevers, which they shew by hanging their Heads, and turning them on one Side, running on a sudden, and stopping short, which is commonly, if not always, attended with a Giddiness, which occasions them to drop, and die, if not timely prevented. When we observe this Distemper upon them, we must strictly regard which Side their Head turns to, and bleed them in the Ear, or in the Neck, on the contrary Side. Some would advise, to bleed them likewise under the Tail, about two Inches below the Rump. It is very certain, that this Giddiness, or, as some call it, Staggers, in a Hog, proceeds from an Over-quantity of Blood, as we are sure, that by bleeding them in Time, they certainly recover.

IN

IN the bleeding of Hogs near the Tail, we may observe a large Vein to rise above the rest. The old Farmers used to beat this Vein with a little Stick, in order to make it rise or swell, and then open it length-ways with a Flemm, or fine Pen-knife ; and after taking away a sufficient Quantity of Blood, such as ten Ounces from a Hog of about fourteen Stone, or fifteen or sixteen from a Hog of five and twenty, and upwards ; bind up the Orifice either with Bast taken from a fresh Matt, or with a Slip taken from the inner Bark of the Lime-Tree, or the inner Bark of a Willow, or the Elm. After bleeding, keep them in the House for a Day or two, giving them Barley-Meal, mixt with warm Water, and allowing them to drink nothing but what is warm, Water chiefly, without any Mixture. In the Paste made with Barley-Meal, some of the most curious Swineherds will give about Half an Ounce a Day of the Bark of Oak, ground fine.

Of the Quinsy in Swine.

THIS is a Distemper which Swine are very subject to, and will prevent their feeding, and frequently happens when they are half fatted ; so that I have known after five or six Weeks putting up, that they have eaten near ten Bushels of Pease, three or four Days of this Distemper, has reduced them to as great Poverty in Flesh, as they were in before they were put up to feed. This Distemper is a Swelling in the Throat, and is remedied by
bleeding

bleeding a little above the Shoulder, or behind the Shoulders. But the Method which I take to be the most certain, is, to bleed them under the Tongue, though some pretend, that Settering is the most certain Method of Cure. However, any one of these Methods will do.

Of the Kernels in Swine, and the Cure.

THE Distemper called the Kernels, is likewise a Swelling in the Throat; the Remedy for which, is, bleeding them under the Tongue, and rubbing their Mouths, after bleeding, with Salt and Wheat-Flour, finely beaten, and well mixt together. If a Sow happens to be with Pig, and has this Distemper upon her, give her the Roots of the common Field Narcissus, or yellow Daffodil.

Loathing of Meat in Swine, or their Discharging it involuntarily by Vomit, and the Remedy.

WHEN Swine discharge their Meat by Vomit, their Stomachs may be corrected by giving them the Raspings of Ivory or Hartshorn, dried in a Pan with Salt, which must be mixed with their Meat, which should be chiefly ground Beans, or ground Acorns; or, for want of these, Barley indifferently broken in the Mill, and scalded with the above Ingredients. Madder is likewise good to be given them on this Occasion, mixt with their Meat. This Distemper, however, is not mortal, but has the ill Effect of reducing Swine in their Flesh. It
certainly

certainly prevents the Distemper called the Blood in Swine, or the Gargut, as some call it, which generally proceeds from their eating too much fresh Grass when they are first turned abroad in the Spring.

Of the Gargut, or Blood, in Swine.

THIS Distemper, among Country People, is always esteemed mortal. Some call it a Madness in Swine. It shews it self almost like the Fever, in Swine, by staggering in their Gate, and loathing their Meat. In the Fever, however, they will eat freely, till the very Time they drop; but, in this, their Stomach will fall off a Day or two before the Staggering or Giddiness appears. But I have already mentioned this Distemper in some of the preceeding Pages, and given an Account of a Hog that I dissected; so that I have no more to do in this Place, than to prescribe the Remedy, *viz.* bleed the Hogs as soon as you perceive them attacked with the Distemper, under the Ears, and under the Tail, according to the Opinion of some. To make them bleed freely, beat them with a small Wand where the Incisions were made: Though it is seldom in this Distemper that the Blood does not come freely enough from the Vein, if it be rightly opened. After Bleeding, keep the Hog in the House, give him Barley and Meal in warm Whey, in which Mixture, give him Madder, or Red Oaker, powdered, or Bole.

Of the Spleen in Swine.

As Swine are unsatiable Creatures, they are frequently troubled with Abundance of the Spleen ; the Remedy for which, is, to give them some Twigs of Tamarisk, boiled or infused in Water ; or if some of the small tender Twigs of Tamarisk, fresh gathered, were to be chopped small, and given them in their Meat, it would greatly assist them ; for the Juice, and every Part of this Wood, is of extraordinary Benefit to Swine in most Cases, but in this Distemper especially. This, I suppose, was very well known to our Forefathers ; because, I observe, in all the very old Gardens of those that have been famed for curious Husbandmen, or Gentlemen curious in this Art, the Tamarisk Tree is generally found growing, though a Plant of very little Beauty, or, at least, not enough to invite any one to plant it in their Gardens, without it was for the Sake of its extraordinary Virtues. It is therefore, I believe, that the Gentlemen in former Days cultivated this Plant for the Sake of their Swine, which Sort of Cattle, I have already signified, has been esteemed ever since the first Accounts we have of Husbandry.

I HAD several of these Plants at *Cambden-House* by *Kensington*, which I propagated from an old Tree. We may see a good Figure of it in *Perkinson's Herbal*. It will grow freely with us in any Station, resists our Frosts, and every little Cutting
of

of it will grow as freely as a Willow, being planted about *February* or *October* in the natural Ground. To such, however, who may not see that Book, it may be necessary to say, that the Leaves of the Tamarisk are somewhat like Fennel, feathered, and open, and the Flowers dusty, like the Catkins, or Jules of common Trees; and, as I remember, (for I have never seen the Flowers more than once) are what the Botanists call staminius, *i. e.* consisting of little Threads topt with Apices.

BUT where the Tamarisk is wanting, we may use the Tops of Heath, boiled in Water, or, what may be more efficacious, in my Opinion, the Water wherein the Ashes or Coal of Heath have been quenched; and more especially, if we use this Water to temper our Barley-Meal with, which we give to our Hogs in Time of Sickneſs.

Of the Choler in Hogs, the Remedy.

THE Distemper called the Choler, in Swine, shews itself by the Hog's Losing its Flesh, Forsaking its Meat, and being more inclined to Sleep than ordinary, even refusing the fresh Food of the Field, and falling into a deep Sleep as soon as he enters it. It is common, in this Distemper, for an Hog to sleep more than three Parts in four of its Time; and consequently he cannot eat as Nature requires him sufficiently for his Nourishment. This is what one may call a Lethargy; for he is no sooner a-sleep, but he seems dead, not being sen-

fible, or moving, though we beat him with the greatest Violence, till, on his own Accord, he recovers.

THIS Distemper, few of the Country Farmers do know what to make of: Some judge it to be pestilential, and as soon as they perceive a Hog is taken with it, they separate him from the Herd: Others, still as ignorant, believe the Distemper proceeds from Witchcraft. But we find, however, that any Emetick will discharge the Creature of this Distemper. The most certain and approved Remedy, is the Root of the *Cucumis Silvestris*, or wild Cucumber, as some call it, stamped and strained with Water, given them to drink. This will immediately cause them to vomit, and soon after to become lively, and leave their Drowfiness. When the Stomach is thus discharged, give them Horse-Beans softened in Pork-Brine, if possible; or, for want of that, in Beef-Brine, or in fresh human Urine, from some healthful Person; or else Acorns that have been infused a Day or two in common Water and Salt, about a fortieth Part of Salt to the Water.

It would be necessary to keep them in the House during the Time of the Operation, and not to suffer them to go out till the Middle of the next Day, first giving them a good *Feed* of Barley-Meal, mixt with Water wherein a little Oak-Bark has been infused for three or four Hours.

I HAVE tried the dried Root of the Monks Rhubarb powdered, and given about a Quarter of an Ounce with a Peck of Barley-Meal, instead of the foregoing Prescription, and it has had a good Effect, by bringing the Hog to feed with good Appetite. This purges the Hog in a more gentle Manner than the former, and is therefore not so sudden in its Effects, though, by the Experience I have had, it is as certain.

Of the Pestilence, or Plague, in Swine.

THIS Distemper is adjudged to be infectious, and therefore all Swine that are taken with it, must immediately be separated from the Herd, and put into some House where none but the infected may come. In this, as well as in all other Cases where Swine are distempered, let them have clean Straw; for, as I have observed and explained before, they are in their Nature very cleanly Creatures. Give them, when they are thus attacked, about a Pint of good White Wine, or Raisins, wherein some of the Roots of the Polypody of the Oak have been boiled, and wherein about ten or twelve bruised Berries of Ivy have been infused. This Medicine will purge them, and, by correcting their Stomach, will discharge the Distemper.

IF, after the first, another Hog should be seized with the same Illness, let the House or Sty be cleaned well from the Straw and Dung of the first

distempered Hog. At the first of his Entrance, give him some Bunches of Wormwood, fresh gathered, for him to feed on at his Pleasure, observing every time that we have Occasion to bring in new-distempered Swine, to give them clean Litter, and clean Houses.

THE Polypody of the Oak in Wine, as above directed, is likewise an approved Remedy for the Distemper mentioned above, called the Choler.

Of Measled Swine.

SWINE, when they are troubled with this Distemper, will have a much hoarser Voice than usual, their Tongues will be pale, and their Skin will be thick set with little Blisters, about the Bigness of Pease. As this Distemper is natural to Swine, the Ancients advise, that we give them their Meat out of leaden Troughs, by way of prevention. It is also a common Practice, where this Distemper prevails, (for it is in some sort pestilential) to give the Hogs an Infusion of Briony-Root and Cummin-Water every Morning in their first *Feed*, by way of precaution. But the most sure Way, is, to prepare the following Medicine, *viz.*

Sulphur, Half a Pound,
 Allum, three Ounces,
 Bay-Berries, three Quarters of a Pint,
 Sutt, two Ounces.

Beat these all together, tye them in a Linnen Cloth,

Cloth, and lay these in the Water which ye give them to drink, stirring them first in the Water.

Of the Distemper in the Lungs of Swine, and its Cure.

SWINE, as they are of a hot Nature, are subject to a Distemper which is called the Thirst, or Lungs, according to some Farmers. This is what I design to treat of, as it is a Distemper proceeding purely from want of Water, and what they are never subject to but in the Summer-time, or where Water is wanting. It is frequently to the Farmer's Expence, very greatly, when Swine are put up to be fatted, that there is not due Care to give them Water enough; then they surely pine, and lose the Benefit of their Meat. The Remedy for this, is, to give them Water fresh and frequently, otherwise it will bring them to have an Over-heat in their Liver, which will occasion this Distemper, which the Farmers generally term the *Lungs*: To cure which, pierce both Ears of the Hog, and put into each Orifice, a Leaf and Stalk, a little bruised, of the Black Hellebore, which Plant, we may see cut and described in *Perkinson's* and *Johnson's* Herbals.

Of the Sleeping-Evil, or Lethargy, in Swine.

THIS Distemper I mention under this Title, because it is known in some Countries only as the Sleeping-Evil, though I have already mentioned the

same Case under the Title of Choler. The immediate Remedy, according to a Gentleman of my Acquaintance, and not at all disagreeable to the other Remedies above, is, to keep the Swine fasting for four and twenty Hours, closely pinned in his Sty, and to give him, when he comes to his Appetite, a good Dose of the Juice of Stonecrop, in warm Wash or Swill, which will immediately occasion him to cast, and recover him from the Distemper. It is necessary, however, to give them Beans or Pease, sodden, and somewhat warm, when their Vomit is over.

Of the Gall in Swine.

THIS Distemper never happens but for want of Appetite, and where the Stomach is too cold to digest, as some Authors say. It generally, as far as my Experience teaches me, happens to those Swine which are confined in nasty Pens, and are neglected and starved in their *Feed*. The Cure of this Distemper, is, to give them the Juice of Colewort or Cabbage-Leaves, with Saffron mixt with Honey and Water about a Pint.

N. B. This Distemper shews it self by a Swelling which appears under the Jaws.

Of the Pox in Swine.

THIS Distemper is remarkable in such Swine as have wanted necessary Subsistence, and more particularly,

ticularly, in such as have wanted Water. Some have thought it to proceed from a venereal Cause, whereby the Blood has been corrupted. It appears in many Sores, upon the Body of the Creature; and whatever Boar or Sow happens to be infected with it, will never thrive, though we give them the best of Meat. The Cure is, to give them inwardly about two large Spoonfuls of Treacle, in Water that has first been made indifferently sweet with Honey, about a Pint at a Time, anointing the Sores with Flower of Brimstone, well mixt in Hogs-Lard; to which one might add, a small Quantity of Tobacco-Dust. While we give the Preparation of Treacle inwardly, the Swine thus infected should be kept in a House, and quite free from the rest of the Herd, till they are cured.

Mr. M----- T----- of Surrey, his Remedy for the Swelling under the Throat.

THIS Distemper appears somewhat like the *Swelling of the Kernels*, or what the ordinary Farmers call, the *Kernels*, in Swine. The most immediate Remedy is, to open the swoln Parts, when they are ripe for that Purpose, with a fine Pen-knife, or Lancet, taking Care that it is not in the least rusty; and there will issue from thence a great Quantity of foetid Matter, of a yellow or greenish Colour. Wash then the Part with fresh human Urine, and dress the Wound with Hogs-Lard.

A Cure

A Cure for the Bite of a Viper, or Mad-Dog, in Swine.

THE Signs of Madnefs in Hogs, which proceeds from the Bites of Vipers, Slow-Worms, or Mad-Dogs, are nearly the fame; *viz.* an Hog on this Occasion will paw with his Feet, foam at his Mouth, and champ or gnash with his Jaws, start suddenly, and jump upon all Four, at Intervals. Some of the Country People have mistaken this Distemper for the Fever, in Swine, or that which is called, by some, the Blood, which I have already mentioned; others have mistaken it for the Staggers: but in neither of these do the Swine paw with their Feet, the venomous Bites alone giving them that Direction. The most immediate Remedy or Cure for such Bitings, if we can judge of their Disaster presently after they are bit, is, to wash the Wound with warm human Urine, or warm Vinegar; or, for want of either, with common Water and Salt, warmed; the Quantity of Salt one fortieth Part to the Water; and then searing or burning the Wound with a red-hot Iron.

It is necessary, at the same time, to fetter the Hog in the Ear with the common Hellebore.

It is convenient, when Swine have been thus bitten, to give them the following Medicine: Compose, of Rhue, the smaller Centaury, Box, St. John's Wort, of each two Handfuls; and Vervain,

vain, a Handful; these Herbs should be boiled in four Gallons of Small Beer, being tyed up in Bunches. When we imagine that this Decoction is strong enough, or has received the Virtue of the Herbs, pass the Liquor through a Sieve, or strain it through a coarse Cloth; then add to it about a Gallon of Water, or as much as will make good the Deficiency of the Water boiled away; add to this, about two Pounds of Flower of Sulphur, and about a Pound of Madder finely beaten, and as much Coriander-Seeds not beat; of Anniseed about three Quarters of a Pound, and fine Oyster-Shell-Powder well prepared; or, in the Lieu of that, the Powder of Crab-Claws, or Lobster-Claws, about six Ounces. This Medicine will be enough for five and twenty Hogs.

Of the Tremor, or Shaking, in Swine, its Cure, from C----- G----- Esq; of Harfordshire.

THIS Distemper is frequently taken for the Staggers, by the Country People, and, according to my own Sentiments, is so nearly the same, that I could hardly regard it to be any other, till my curious Friend C----- G----- communicated to me the following Receipt, with his Opinion that it was not directly the same. He observes, however, in his Letter to me, that the Remedy he prescribes, is successful in both Distempers; and he guesses that, to use his own Words, *To be an Ague in a Hog.* He directs, to bleed a Hog so taken, in the Tail; the

the Method of doing which, I have already mentioned above.

THE Draught, which we must then prepare for the Swine thus attacked, must be composed of Hyssop and Mallows, in Stalks and Leaves, about a Handful of each, to be boiled in three Pints of Milk, till the Virtue of the Herbs has sufficiently got into it; then pass the Liquor through a Sieve, or strain it, to be free from the Herbs; adding then of Madder, two Spoonfuls, and about an Ounce of Liquorice sliced, with as much Anniseed.

THIS Medicine must be given to the Hog two Mornings successively, and has been found a certain Remedy. Thus far my Friend.

It is remarkable, that Madder is of the greatest Concern to Farmers who have large Herds of Swine; for it is of use in almost every Medicine, and for every Distemper these Creatures are subject to; but it is likewise as necessary that it should be always used when it is fresh, that is, not to exceed the Age of two Years.

Mr. Tyson, of Warwickshire, his Remedy for the Staggers in a Hog.

THIS Distemper is to be cured two Ways, viz. either by a Draught prepared of Flower of Sulphur and Madder ground or powdered, about an Ounce of each boiled in new Milk, and given at
twice

twice to the Hog fasting in the Morning, two Days following, if we take the Distemper in the Beginning; or else, when it has already seized his Head with Violence, use the following Preparation.

TAKE of the common Houseleek and Rhue, equal Quantities; to which add, Bay-Salt, enough to make their Juices very pungent, when they are bruised together, which should be done in a Stone or Marble Mortar, with a wooden Pestle: When these are well stamped and mixed together, add a large Spoonful of the strongest Vinegar you can get, and put the Mixture into the Ears of the Hog, stopping them both close with Tow, Wool, or Cotton; so that it may remain in a Day and a Night. This, if the Hog is not too far gone, will recover him; but if he is not yet quite well, the same must be repeated a second Time; and as soon as the Mixture is taken out of his Ears, stop them with Sheep's Wool, or with Cotton or Tow that has been greased a little with Oyl of Almonds; for this will prevent his taking Cold.

Of the Murrain, and Measles, in Swine, a Remedy, from a curious Gentleman of Northamptonshire.

ALTHOUGH I have already mentioned this Distemper and its Cure, give me Leave yet, to insert another Remedy which has been highly commended.

TAKE

TAKE, of the Flower of Sulphur, half an Ounce, and as much Madder powdered or ground as it comes over; Liquorice sliced, about a Quarter of an Ounce, and Anniseed, the same Quantity; to this put a Spoonful of Wheat-Flour, and mix it in new Milk, to give the Hog in a Morning fasting; repeat this Medicine twice or thrice.



C H A P. III.

Of the Bull, Cow, and Ox; the Method of Breeding and Feeding them to the best Advantage.

BEFORE we enter upon the Management of Cattle, according to the most approved Practice of *English* Farmers, I judge it necessary to give my Reader a View of what relates to Kine, from the ancient Writers of Husbandry.

FROM this noble Beast, many great Things received their Names; for of the Number and Beauty of Heifers, *Italy* is so called, because *Hercules* pursued the famous Bull called *Italus*. This is the chief Companion of the Husbandman in his Labours, and the trusty Servant of the Goddess *Ceres*.

VARRO

VARRO makes four Degrees in their Age: The first, of Calves; the second, of Yearlings; the third, of Steers; and the fourth, Full-grown. The Sexes in the first, the Bull-Calf and the Cow-Calf; in the second, the Heifer and the Steer; in the third, the Bull and Cow. The Barren-Cow he calleth *Tauram*, the Milch-Cow *Hordam*, from whence came their Feasts called *Hordica festa*, because the Milch-Kine were then sacrificed. This Sort of Cattle differs according to the several Countries where they are bred. The best were counted in old Times, to be of the Breed of *Albania*, *Campania*, and *Tuscany*: At this Day we take the best Kind to be in *Hungary*, *Burgundy*, *Friesland*, *Denmark*, and *England*, which are either larger or smaller, as the Countries where they are bred are more or less fertile. However, we find, that the Red Sort is generally larger than the White, and the Black the least of all. It is observable, that the Feed of the Marshes more particularly helps this Sort of Cattle to the Increase of Flesh, and Quantity of Tallow; and the mountainous Parts, where the Grass is short, affords us such Cattle as are tender in their Flesh, and have the more delicate Taste, though of a smaller Size than the Marsh-fed Cattle.

LINCOLNSHIRE, and *Somersetshire*, are both noted for the Production of large Beasts, generally of the Red Colour, or a Cross-strain, between them and the Black. In some Parts of *Surrey*,

rey, we meet with the White Sort, which being cross-strained with either of the other, produce Pyed Cattle. It is reported, that the White Sort produce the richest Milk, and then their Flesh more readily receives Salt, than any of the other.

IN the Choice of Cattle, whether for the Stall, the Draught, or the Pail, it is best to take the youngest, rather than those that are old and barren. And though some Oxen are chosen by their Strength, and some by the Greatness of their Bodies, yet the best have commonly these Properties; large, well-knit, and sound Limbs; a long, large, and deep-sided Body, white-horned, broad-foreheaded, great-eyed and black, the Ears rough and hairy, the Jaws large and wide, the Lips blackish, the Neck well-brawned and thick, the Dew-lap large, and hanging down from his Neck to his Knees, the Shoulders broad, the Hide not hard or stubborn in feeling, the Belly deep, the Legs well-set, full of Sinews, and streight, rather short than long, the better to sustain the Weight of his Body, the Knees streight and great, the Feet one far from another, not broad, nor turning in, but easily spreading, the Hair of all his Body thick and short, the Tail long, and big haired.

PALLADIUS thinketh the best Time for buying of Draught-Oxen, to be in *March*, when being bare, they cannot easily hide their Faults, by the Fraud of the Seller, nor by Reason of their Weakness, be too stubborn to be handled. It is best

best to buy them of your Neighbour, lest the Change of Air and Soil, hurt them; for the Bullock that is brought up near Home, is better than the Stranger, because he is neither troubled with Change of Air, Water, or Pasture. Look, besides, that they be gentle, skilful in their Labour, fearful of the Goad and the Driver, not dreading any Water or Bridge, hearty Feeders, but not over-hasty, for such do best digest their Meat.

MR. *Fitzherbert* gives us the following Directions, to be observed in the Choice of Lean Cattle for Feeding, as well as those which are already fat. His Words are these;

‘ These husbandes and they that wyl thyrue
 ‘ they must haue both kie, oren, horses, mares,
 ‘ and yong cattel, and to reyre and bryde eury
 ‘ yere some calves and foles, or els shal he be
 ‘ a byer. And if thou shalt bye oren for the
 ‘ plough, se that they be yonge and nat gouty,
 ‘ nor broken of heare nother of tayle, nor of
 ‘ pyssel. And if thou bye Kye to the payle, se
 ‘ that they be yong and good to mylke, and
 ‘ fede her calves wel. And yf thou bye Keye
 ‘ or Oren to fede, the yonger they be the ra-
 ‘ ther they wyl fede, but loke wel that the
 ‘ heare stare nat, and that he lycke him selfe,
 ‘ and be whole mouthed, and want no teth.
 ‘ And though he haue the goute, and be bro-
 K ‘ keil

' ken both of taylor and pyssel, yet wyl he fede.
 ' But the gouty ore wyl nat be driven far,
 ' and se that he haue a brode rybbe and a thicke
 ' hyde, and to be louse skinned, that it sticke
 ' nat harde nor strait to his ribbes, for then he
 ' wyl nat fede.

' And yf thou shalt bye fat oren or kye, han-
 ' dle them and se that they be softe on the fore
 ' crop behynde the shoulder and upon the gyn-
 ' dermost ryb and vpon the hucklebone, and
 ' the nache by the taylor. And se the ore haue a
 ' great cod and the cowe a great nauyl, for
 ' then it shulde seme that they shuld be wel ta-
 ' lowed. And take hede wher thou byest any
 ' leane cattel or fat, and of whom, and wher
 ' it was bred; For yf thou bye out of a bet-
 ' ter grounde then thou haste thy selfe, that
 ' cattel wyl nat lyke with the. Also loke that
 ' there be no maner of sicknes among the ca-
 ' tel in that towneshyp or pasture that thou by-
 ' est thy cattel out of. For if there be any mur-
 ' ren or longsaught, it is great jeopardy, for a
 ' beast may take sicknes ten or twelue dayes
 ' or more, or it appere on him.

In choosynge of Bulls or Kine, the like Signs are
 to be observed; that the Bull differeth from the
 Ox in that he hath a more frowning and fierce
 Look, shorter Horns, and a larger and thicker
 Neck. The Bull, before he be suffered to go with
 the

the Cows, must be well fed with Grass, Chaff, or Hay, and kept by himself.

IN the Choice of Cows, those with the following Marks are most worthy our Esteem. To be high of Stature, long-bodied, having great Udders, broad Forehead, fair Horns, and smooth, and almost all other Tokens that are required in the Bull; especially to be young; for when they are past twelve Years old, they are not good for Brood: But they live many Times much longer, if their Pasture be good, and they kept from Diseases. It is commonly judged, among the Country People, that the old Cow giveth more Milk than the young; but I am of the contrary Opinion, notwithstanding the Proverb, *Old Kine more Milk, Young Hens more Eggs*. Under three Years old, you must not suffer them to go to Bull: If they chance to be with Calf before, you must put the Calf from them, and milk them for three Days after, lest their Udders be sore; afterwards forbear milking.

PLINY tells us, that they be fruitful at a Year old; but the Breed will be small, as it happens in all too timely Ingenderings. You must every Year, in these Beasts, (as in all other) sort their Stock, that the old which are barren, or unfit for breeding, may be put away, sold, or fed for the Butcher. Their Age is known by the Knots and Circles of their Horns. The best Time

for going to Bull, some take to be in the Spring: *Palladius* would have it in *July*, for so in the ninth Month she will calve.

IN many Places they desire to have their Cows go to Bull about the End of *July*, that they may calve in *March* or *April*. To order them so as that they may have Plenty of Milk, let your Kine go to Bull from the Spring to Winter, whereby you may always milk some.

A Cow commonly conceives at once Bulling; but if she chance to fail, she goeth to Bull again within twenty Days after.

COLUMELLA tells us, that fifteen Cows are enough for one Bull; but twenty are now generally allowed.

IF you have good Store of Pasture, you may let them go to Bull every Year; but you must have Regard to the State of them, that they are not too fat when they go to the Bull, or during their Pregnancy; for which Reason, it is best to keep the Cow in short Pasture, while she goes with Calf, while no Pasture can be too good for the Bull, to make him strong and vigorous. It is reported, that to make the Cow stand to the Bull, you must stamp the Roots of Squills, or Sea-Onions, in Water, and rub her under the Tail therewith.

A BULL ought not to be suffered to serve above **two Cows** in a Day, if we hope for strong Calves.

IN some Places they have Common Bulls, and Common Boars, to every Town.

A Cow will give suck to a strange Calf; but let not the Calves lie with them in the Night, for fear of over-laying them.

SOME wean them at first, and suckle them with Milk or Whey, having a little Bran in it, or Flower, wherewith they bring them up till they are able to feed. Whether you design to raise them for Breed, Labour, or Feeding, you must not let them want for Store of good Pasture; for if their Pasture be scanty at first, they will never come to be of a large Growth: For *Pasture makes the Beast*, according to the old Country Proverb.

SOME of the best Husbands geld their Calves at three Months old, sowing up the Wound, and anointing it with Fresh Butter. In the Cutting of Calves, you must tye them up to a Frame; and before you cut them, you must fasten about the Strings whereby the Testicles hang, a Couple of small Sticks, like a Pair of Tongs, and taking hold by them, cut away the Testicles, so as a little of the upper Parts of them may remain with the fore-said Strings; for by this Means the Creature does not run so much Hazard by over-bleeding, neither

is his Stomach quite taken away. He must not be suffered to drink the first Day, but nourished with a little Meat. Three Days after, he must be dieted according to his Weakness, with the young Boughs of Elm, and sweet Grass cut for him; and take Care that he does not drink too much. You must use them, while they be yet young, to suffer to be handled, and stroked, and tyed up to the Manger, that when they shall come to be broken, they may be handled with more Ease, and less Danger.

COLUMELLA tells us, that it is not proper to break those Calves which we design for the Yoke, before they are three Years old, nor after five; for the one is too soon, and the other too late: For if we break them sooner than what he mentions, we are apt to endanger their Strength by over-straining; and they are too stubborn to yield submissively to the Yoke after five Years old.

It has been a Custom in *England*, to train up Heifers for the Plough; but then they must be spayed, which will occasion them to grow extreamly large; and, as I have been informed from a Gentleman of *Gloucestershire*, if we feed them when they are past Labour, they will yield as good Profit at the Market, as an high-prized Bullock, and by a more particular Account from him, I learn, that he sold one of his own rearing for fifteen Pounds.

BUT

BUT let us now consider whether it would be more to the Advantage of a Farmer to keep spayed Cows, or Cows for the Pail, or for Breed. All that we can say to this, is, that in some Countries the Labour of these Creatures may turn to as good Profit as that of Horses; and, provided they should happen to be lamed, or otherwise hurt, they may yet be fed for the Butcher, which will render them more profitable than an Horse that has been used ill, or suffered by Distemper. In the Countries, however, where this Practice ought chiefly to be used, you should suppose the greatest Profit cannot be made of the Milk of Cows, either as pure Milk from the Pail, or by Butter, or Cheese, or the Feed of Swine, or by suckling of Calves; neither should these spayed Cows be cultivated in such Countries as are more proper for grazing them for Corn, or the Improvement of Grain; for then we should hardly reap any thing from their Labour, and they would be a continual Charge, without any Benefit to the Farmer, till he could fat them for Beef.

IT is to be noted, that whatever Calves we spay on this Occasion, should undergo that Operation at about six Months old. I find, the most skilful Farmers pitch upon the Black Sort for cutting, as supposing they will make the most hardy Beasts for Labour, while the Red Cattle grow to the greatest Stature, and are judged to afford richer Milk.

NEAR *London*, or other very populous Places, the Milk of Cows will yield a sufficient Profit in the Pail ; but in Places remoter from the Market, it is either disposed of in the Dairy for making of Butter, if the Feed is such as is rich and hearty, and consists of pure Grass, which is sweet, and free from Weeds ; for where it is otherwise, that is, offended with Crow-Garlicks, and the Plant called *Alliaria*, or *Sauce-alone*, the Butter will always be rank. In such Cases, therefore, the Milk may be converted to Cheese, of such Sort as they make in *Cheshire*. To be nice, however, in the making of Cheese, of these Plants which have ungrateful Smells too many, should not be suffered to grow among the Grass. It is likewise to be observed, that long Grass, though it feeds well, and makes Cattle abound in Milk, yet the Milk of such Cattle will not be so rich, nor carry near so much Cream in Proportion, as the Milk of those Cattle which feed upon the shorter Grass. And these different Sorts of Pastures ought principally to be considered by a Farmer, before he appoints what shall be done with his Milk, or sets out his Dairy ; and if the Feed should produce only a thin Sort of Milk, but in good Quantity, then to use it in the suckling of Calves, if they have not a Call for it immediately in the Pail.

THE Feeding of Calves as they do in *Essex* and *Hertfordshire*, for Veal, is profitable enough, considering there is not the continual going to Market
with

with the Butter, or Milk, seeing that a Calf of nine or ten Weeks old, may sell to the Butcher for 50 s. or 3 l. at *London* Market, and that the Farmer can make some little Profit then, of his Milk, in Cheese, or otherwise, till such Times as he can exchange that Cow for another which is already pregnant, and near calving; so may he well enough, if he has a Number of Cows, and his Farm not over-stocked, make about six or seven Pounds a Year of each Head. But if we feed these Calves only in the Spring and Summer Seasons, then the Over-plus of the Milk in the Winter will be profitable in Butter, when it is scarce. Or should it happen that we should use our Milk in the Dairy during the Summer, and suckle Calves only in the Winter, it would be nearly the same Advantage to the Farmer.

IN the fattening of Calves for Veal, the *Essex* Way, the following Particulars are generally observed, *viz.* That the Calf be kept cool and dry, that their Suckling Times are never neglected, but that they always have their Milk given them at constant Hours. Again, they must not be suffered to lick any Thing, except it is a Chalk Stone now and then, though it is much better to debar them from that, and rather give them Chalk finely scraped, at Times, in their Milk, in small Quantities.

FOR this End, the Farmers have Pens on Purpose, with Floors raised two or three Foot above Ground, to keep them from the Damp of the Ground

Ground, and so disposed, that their Urine may easily drain off. These are so far open in the Front, that they may receive as much Air as possible, and so well covered at the Top, that they cannot receive any Injury from Storms of Rain. To prevent their licking of the Walls, or any Thing which may be disagreeable to the Colour of the Flesh, a curious Gentleman of *Essex* has contrived to tye to their Yoke or Collar, a streight Bit of Stick, disposed in such Manner, as to pass over the whole Length of their Head, and project four or five Inches beyond the Muzzle, which will always stand in their Way, and prevent them from licking of any Thing. It is customary, besides all this Care, to bleed them frequently, as it is supposed, and designed, to make their Flesh white; but in my Opinion should not be done in that Excess our Farmers generally do it, no more than the keeping them from Meat a Day or two before they are killed: For these Methods certainly sicken the Calves, and consequently their Flesh cannot be so wholesome as if they had been killed while they were in perfect Health.

THE Case is the same with that of Fish that are brought from the Sea to *London* in Well-Boats, which sicken on their Change from the Salt through the Fresh Waters, and become faint and insipid in their Taste when they come to be prepared for the Table; while, on the other Hand, those Fish which are killed immediately after they are caught,

will

will eat sound and firm, with their full Flavour, a Day or two after, if they are kept cool.

BUT notwithstanding there is this nice Care used for the fattening of Calves in *Essex* and *Hertfordshire*, to render their Flesh white, yet, in my Opinion, a Calf of six Weeks, that has been well suckled, and kept in a cool Place, without any of the other Ceremonies, has yielded a Flesh no ways inferior to the *Essex*-fed Veal. For although perhaps it may not appear when it is brought to Market, so white as the other, yet when it comes to the Table, it is not wanting of as good a Colour as the other, and has its Juices much more nourishing.

As I have been treating of Kine in the State of Calves, it will be necessary to say something, before I leave them, of the Distempers which they are most subject to, and Inconveniencies which generally attend them. The first which I shall mention, is the Lask.

Of the Lask, or Scouring, or Looseness, in a Suckling-Calf.

TAKE New-Milk from the Cow, a Quart; and simmer or boil gently in that, a Handful of Marsh-Mallows, or, for want of them, common Mallows, about Half an Hour; then strain the Milk from the Herbs, and put in the Powder of Liquorice and Anniseeds, each a Quarter of an Ounce, with an Ounce of Treacle, and as much Butter, mixing
all

all well together, and giving Half to the Calf one Morning, and the rest the Morning following.

To prevent the Striking of Calves, a Draught, to be given them about Michaelmas, enough for five.

TAKE Rhue, the smaller Centaury, Featherfew, Ragweed or Ragwort, and Cellandine, each Half an Handful; tye them in Bunches, and boil them in five Quarts of middling Beer which is clear, and well freed from the Yest; or if it should happen that no such Beer can be had, then use a like Quantity of Water, and add to the foregoing Ingredients, three Pints of Malt; let them boil a Quarter of an Hour, and strain out the Herbs till no Liquor will run from them; then add, of Flower of Brimstone, four Ounces; Powder of Liquorice, Madder and Anniseed, of each two Ounces; the whole being well stirred together, and made milk-warm, must be divided into five Parts, and given to as many Calves.

S E C T. I.

AS I have given my Thoughts of Cows, Oxen, and Calves, which I thought might prove of some Advantage to the Farmer, it is now Time to enter more particularly upon the Matter, with Regard to the Produce of Milk, and its Improvement by Cheese and Butter. I have already directed, what Lands ought to be chosen for one and the

the other ; so that I have nothing to do but to lead my Reader directly into the Dairy, to give him the Choice of the several Sorts of Cheeses made in *England*, and in Foreign Countries ; which because of their Disposition to keep longer, or improve more by keeping, than Butter, I shall first take in Hand.

Observations relating to the making of the famous Stilton-Cheeses.

THE Cheese of *Stilton*, which has been so famous for many Years, and has been so difficult to make rightly, notwithstanding there have been the best Receipts for it, in the Families that have attempted it, gives me Occasion of mentioning it more particularly than I have done in any other of my Works. According to the Receipt that I have given before, for making the *Stilton*-Cheese, we are to take ten Gallons of Morning-Milk, and half as much sweet Cream, beating them well together, and adding as much Boiling, Spring, or River Water, as will make the Milk somewhat warmer than the Milk from a Cow ; this done, we are to apply the Rennet, prepared or made strong of Mace : so far it has been before given by me. But I find that some of my Readers have not rightly understood what was meant by making the Rennet strong of the Mace ; it is therefore necessary to say in this Place, that in the boiling of the Rennet-Liquor, a good Quantity of Mace should be put into it, and not infused, as some People imagine.

By

By this Mistake, many may be disappointed, as well as those who put in the Mace when they have made the proper Decoction of Rennet after it is cold, and let it remain there ; for by this last Method, the Rennet will in a short Time become disagreeable, and lose the Beauty of the Spice.

WITH a Rennet prepared as I have now more particularly directed, we are to raise the Curd, by putting in such a Quantity of Rennet into the Mixture of Milk and Cream, as every one skilful in a Dairy knows how to do, in order to set Milk.

WHEN the Milk is Come, or set in Curd, break it with a Fleeting-Dish, or otherwise, as small as you would do for Cheesecakes ; and after that, salt it, and put it in the Cheese-Vat, or Cheese-Mote, pressing it for two Hours.

THE Whey must then be boiled ; and when you have taken from the boiling Whey such Curds as will rise in IT, which are for the most part called *Wild Curds*, put the Cheese into the Whey, and let it there remain for Half an Hour, then put it again into the Press, and when you take it from thence, bind it up close on the Sides with Linnen Rowlers, turning it upon Boards of Oak, Ash, or Beach ; but by no Means upon Deal, lest the Turpentine of the Deal should give it a disagreeable Taste.

N. B.

N. B. THIS Cheese must be turned twice a Day for the first Month.

As to the Fashion of this Cheese, it is about eight Inches high, and about seven Inches the Diameter over the Top. It is so soft, that when we cut it at a Year old, or about the *Christmas* next after the making, one may spread it upon Bread like Butter; and the Flavour, which proceeds in a great Measure from the Mace in the Rennet, is generally allowed to be very agreeable. But it is not every where in *Stilton* that this Cheese is in Perfection, or made agreeably to the foregoing Original Receipt: I have only found it there to answer my Expectation at the Sign of the *Bell*, where the true Method of making it is followed; notwithstanding that every House in the Town where this Sort of Cheese is to be disposed of, sells it at 12d. per Pound.

It is a common Custom, when the Cheese begins to dry, as it will do about ten Weeks or three Months after making, to cut a Hole in the Middle of the Top, and scoop it down within an Inch of the Bottom, about an Inch wide; then pour in a Quantity of Sack or Canary Wine, or Tent, till it rises within an Inch of the Top, which must be then stopped down close, with Part of the Cheese that we took out, and set by in a good Vault or Cellar. Some rather choose to do this Work after the Cheese has been made four Months; and

and what is very remarkable, when we come to open it, or scoop it out for Use, at the Table, we shall not perceive the Vacancy we made when we put in the Wine.

N. B. A *Stilton*-Cheese generally weighs eighteen Pounds, and the Carriage by the Coach from *Stilton* to *London*, is Half a Crown, besides the Price of the covered Basket, which comes to about six Pence.

To make Angelot-Cheese.

TAKE the Stroakings of two or three Cows, and set it with Rennet, when it is newly milked; and when it is *come*, take it up with a Skimming-Dish, without breaking the Curd, and then fill by Degrees a narrow high Cheese-Mote, or Vat, continually filling as the Curd sinks, till the Mote is full. If you would have the *Angelot* thick, the Mote or Vat should be six, eight, or ten Inches deep, according to the Size you desire to have it. You must keep it continually filling for three or four Hours; then let it stand till Night, strawing a little Salt upon the End that is uppermost, and turn it by clapping a Trencher or Board to the same End of the Vat, and then salt the other End, and so let it remain nine or ten Days without removing, lest it should crack and break; by which Time it will shrink, and sinking, slip easily out of the Vat. After this, keep it in a temperate Place, that it may dry by Degrees.

THE

THE proper Season to make this excellent Sort of *Angelot-Cheese*, is in the Beginning of *May* or *September*. If you would have it fatter, add a fourth Part of Cream.

To make Cheshire-Cheese;

THE Milk is strained into a Cheese-Tub, as warm as they can from the Cow; to which is put about six Spoonfuls of strong Rennet, and then it is stirred well with a Fleeting-Dish, and afterwards covered close with a wooden Cover, made fit for it; and about the Beginning of *June* it stands three Quarters of an Hour; but if very hot Weather, less Time, and then it will be *Come*: after which, it must be broke with a Dish pretty small, and then it must be stirred, gently moving, till it is all *Come* to a Curd: then it must be pressed down with the Hands and Dish gently, lest the Whey rise over-white; and when all the Whey is drained, and the Curd pretty hard, then it must be broke into a Vat, very small, and heaped up to the highest Pitch, and then prest down with the Hands; gently at first, afterwards harder, till as much Whey be got out, as can be that Way, and yet the Curd be at least two Inches above the Vat; otherwise the Cheese will not take Press; that is, will be soure, and full of Holes or Eyes.

THIS done, it must be put into one End of a good Flaxen Cloth, and covered with the other

End ; and then the Cloth must be tucked in with a wooden Cheese-Knife, that it may lie smooth, and yet keep the Curd quite in. Then this is prest with the Weight of four Hundred, or thereabouts, and let to stand thus from Morning about nine, till Afternoon about two a Clock ; and then taken out, turned into a dry Cloth, and prest again till about six at Night: and then it is taken out, and salted well, all over, (else it will be maggotty) and put in the Vat again, to lie in it all Night ; then it is taken out, and salted again, and so it lies in a Tub, or on a Dresser, four Days: only it must be turned every Day.

THIS done, it is washed in cold Water, wiped with a dry Cloth, and carried into a Cheese-Loft to dry, where it must be turned and wiped every Day till fold.

IF the Salt be not well washed off, it will give, and make the Cheese almost always moist.

THE Reason of Mouldiness, Cracks, and Rotteness within, is the not well Curing, *viz.* Pressing and looking after.

To make Cheddar-Cheese.

CHEDDER being warmly seated on the South-side of *Mendip Hills* in *Somersetshire*, and at the Foot of them, near the Town of *Axbridge*, is exposed only to the South and South-West Winds; and

and has the Moors adjacent to it on the South, being a warm and fertil Soil for Pasturage, whereby *Cheddar* is rendered famous for Cheese; and it has been long a Custom there, as well as in some adjacent Parishes, for several Neighbours to join their Milk together, as Occasion requires, to make the said Cheese, which is of a bigger Size than ordinary, and contends in Goodness, (if kept a due Time, *viz.* from two Years to five, according to Magnitude) with any Cheese of *England*. The Sizes of the same Cheeses are generally from thirty Pounds Weight to an Hundred Pounds; and perhaps this Practice, when duly considered, may deserve Imitation in many Parts of our Country.

To make Cream-Cheese.

THE Milk is strained into a Cheese-Tub, often in the Fields; and to twenty Gallons of Milk, are put about three Spoonfuls of Rennet, which in Half an Hour will make it *Come*. It must not be *Set* when hot just from the Cow, but when lukewarm, else it will be tough, and run to *Coat*.

WHEN it is *Come*, it is broke gently with a Fleet-ing-Dish, stirred well from the Bottom, and all one Way: For if it be mashed all together every Way, it will be lean, that is, the Butter will run more into the Whey. After this, it must settle about Half an Hour, and then a Plug that stops a Hole in the Middle of the Tub, must be loosened to let the Whey run out into clean Vessels.

This done, the Curd is put into a Canvas-Cloth, and between two Folks rolled up and down gently, till the Whey is pretty well drained from it. Then it is tyed up and hung on a Tack to drip, (still saving the Whey) till it has done dropping. Then it is put into a deep Cheese-Vat, that is big enough, and a Board is laid over it, and on that a fourteen Pound Weight, just to fashion it, and so it is left all Night.

In the Morning, this Cheese is turned out nine Inches thick, and with a long filken Thread cut into Cheeses half an Inch thick, which are laid on smooth Boards, and gently salted, and turned twice in a Day for the first four Days, and then laid on the Nettles near the Ground, and turned twice a Day for three Days; and the next Day they are laid on Boards to dry; and six Cheeses on each of them Boards are carried to Market, where they are sold after the Rate of three Pence or a Groat a Pound.

In hot Weather, eight Days, in cooler, a Fortnight, finishes them.

To make Morning-Milk-Cheese.

This is made of the whole Meal of Morning-Milk, and sett hot from the Cow, and made after the same Manner, and will sell for two Pence or three Pence a Pound. This Cheese will have a rough

rough Coat, and will keep two or three Years, if laid moist in a Cellar, the other will be smooth.

To make Morning-Milk-Cheese of the First Make.

THIS is made after the same Manner, but thicker, and pressed harder, which will keep all the Year. This sells for four Pence *per* Pound, and is dry, and fit for eating, about the latter End of July.

To make Evening-Milk-Cheese of the First Make.

THIS is made after the same Manner, and sells for a Half-penny or Penny the Pound less. The Reason why Morning-Milk is best, is thought to be from the Rest of the Cow. It is much less in Quantity, and is but about eight or nine Hours from the last Milking. It yields more Cream, and will not soure in hot Weather so soon as the other, by three or four Hours.

To make Two-Meal-Cheese.

THE Morning-Milk is set by till Night, and skimmed, and the Evening New-Milk is put to it, and so made into Cheese, as before, which will sell for two Pence or two Pence half-penny a Pound.

To make Fleet-Milk, or Flet-Milk-Cheese.

THIS must be warm when put together, and made as the other, only pressed very hard ; and is sold at two Pence a Pound, or under: But it is seldom brought to Market,

IF Milk be set over-hot, or be scalded in the Curd, the Cheese will be bitter ; and the longer it is kept, the worse it will be: If it be set over-cold, it will cut white, and eat harsh and dry when new ; but it will improve by lying, and is best esteemed of for Keeping-Cheese.

ONE great Fault in Cheese, is its *Heaving* ; and this is most common where there is the richest Pasture, and After-Rain ; and the best Way the Dairy-Men know how to help it, is, by pasturing Sheep with their Cows, that the best of the Grass may be quickly eaten. Another Way to prevent it, is, to salt them in Brine, or lay them on cold Pavements.

IT seems to me very probable, that it does thus chiefly in hot Weather, by reason of an over-great Fermentation, not only from the Heat, but also from the Briskness and Thinness of the milky Particles gained from the Luxuriancy of the Grass: and, without Doubt, it is as convenient for Dairies to have cool Rooms in Summer, as warm ones in Winter. We see, by Multitudes of Examples, that

that Beer, and other Liquors, or Bread, or any Thing that is subject to Fermentation, never prove so kindly in extream, as they do in temperate Seasons.

It is generally held, that a moderate Salting is of great Use; for too much alters the Goodness, too little causes Corruption of the Cheese: Therefore to lay them all in Brine a longer or a shorter Time, according to their Magnitudes, or the Temper of the Weather, would be the surest Way. And some cut the Cheese after a little Pressing, and salt it.

SOME Farmers find it difficult to prevent the buttery Part from running into the Whey; but that happens chiefly from the Over-pressing of a Cheese; for which Reason, most of our best Cheeses are made by suffering the Curd at first to sink almost of itself, which fixes the Cream in the Curd. Likewise, it is a Fault to put too much Rennet to the Milk, because it restrains the Curd from receiving the more oily or buttery Parts of the Milk: But, in such a Case, the Farmers make Butter from the Whey.

THE Reasons why Cheese is generally made in the Summer, are; first, because the Cows abound then more in Milk than at other Seasons, and their Milk is richer, yielding a smaller Quantity of Whey or Butter-Milk, and the Curd will set and close much better. In an indifferent Year, a good Cow will yield at this Time, sixteen or eighteen Quarts in a

Day ; and if the Weather be dripping, she will yield more, and Butter is made longer.

IN making Cheese, we are to endeavour, in a particular Manner, to preserve the hard Part of it from Putrefaction, as it is necessary to preserve the oily Part in Butter, from changing : therefore some in the making of Cheese, have a certain standard Quantity of Rennet, to a fixed Proportion of Milk, that the Curd may be made hard to a certain Degree. But what I have said above, with regard to the restraining the Curd, by too much Rennet, from receiving the oily or buttery Parts of the Milk, is one of the greatest Niceties belonging to the Dairy.

To raise the Curd in Milk, besides the common Rennet made of a Calf's Bag, there are many other Things used ; as the Flowers of Thistles or Artichokes, and several other Acids. Some make Rennet from the Maw or Bag of a Kid, which, as well as that Rennet made of the Calf's Bag, causes it to turn to a digestible Consistence. Some put in this Maw by snipping off a Thong at a Time, which the Butchers know how to prepare. Some pickle the Maw, and dry it in the Smoke, and put the Cheese together while the Milk continues warm, or heat a Part, and mingle it to warm the rest. It is necessary to observe particularly, that the Curd with which we make the common Rennet, and which is found in the Calf's Bag, be well washed and cleaned, from the Hairs which one shall find in it, and seasoned well with Salt ;
also,

also, to wipe the Bag, and salt it well within and without ; and putting in the Curd, all must lye in Salt for three or four Days, and then be hung up. This is the *Cheshire* Way.

WHEN the Milk is curdled, the meer dividing makes the Whey to separate, and the Curd subside ; which must be put into a Vessel of what Form desired, and thrust very close, and salted ; and this to prevent Corruption, which requires Fluidity, as all Change of Texture does ; and the Salt dissolving, makes the Moisture so thin, as to run away, and when dry, shoots and keeps all firm. Then the Cheese is pressed, and either sliced and scalded, which makes it coagulate yet harder, or only crumbled, to open it, and let out the Moisture. Then it is made up again, and pressed yet harder, to make it close and firm. Some ripen or rot it in Dung, or green Herbs that will heat, or in Smoke ; that makes it soft, nourishing, and for present eating. Others keep it dry for many Years, and for Duration and Nourishment, some think no Food yet equals it.

THE *Suffolk*-Cheese, or that generally so called, which is hard and dry, so that it is difficult even to be cut, is, notwithstanding, of great Use for the Sea-faring Men, who are obliged to pass such Climates as would spoil other Cheese ; though I have known as good Cheese made in *Suffolk*, as in any County in *England*.

WHERE

WHERE People are curious in transporting Cheese to the hotter Climates, it may be done, as I find by Experience, by putting them in Vessels of Oil, even to pass the *Line* twice, without receiving any Hurt or Damage. Some of these I have seen in *Holland*, that have been an *East-India* Voyage, and were said to be in higher Perfection than any of the same Sort that had met with only the common Usage.

THE Way of making their Rennet generally in *Essex*, is this: They take the fourth and last Ventricle of a Calf, which by *Aristotle* is called *Fruscor*, and by *Gaza*, *Abomasus*, but by us *English*, the *Bagg*: This they open, and take out the Curd, picking it well of the Hairs which are abundantly mixed with it: Then being well washed it is put into the Bag again, with a great Quantity of Salt, and kept in an earthen-glazed Vessel until the Time of Use; which is thus set on Work. If it be the Beginning of the Spring when they first make Cheese, they boil Salt and Water together, and in this they steep their Bag, prepared as before; but afterwards, when they have made Cheese, they steep it all together in Whey well salted, or Water boiled with Salt; and sometimes to make it of an high Flavour, they boil Spices with it; but chiefly *Mace*.

AMONG the several Things that will coagulate Milk, or set it to Curd, we find, that the Plant called

called *Cheeserening*, or *Yellow Ladies-Bedstraw*, is used about *Nantwich* in *Cheshire*, which from its Effects of coagulating Milk, is called *Γάλλιον*, by *Dioscorides*. The like Virtue is attributed to it by *Galen*, in his Book *Simplicium Medicamentorum*. Also *Matthiolus*, p. 793. says, that in *Tuscany* they use it to turn their Milk with; and in the *Parmesan* especially.

THE Cheese made of Goats and Sheeps Milk, will taste the pleasanter where this Rennet is used.

GERRARD, who was a *Cheshire*-Man, speaks mightily in the Praise of Cheese made by means of the foregoing Plant, esteeming that the best Cheese which is made with it.

THERE are yet other Ways of making Rennet for Turning or Setting of Milk, viz. *Carduus Benedictus*, the Seed, the Juice of the Fig-Tree, Ginger, the Inner Skin of a Hen's Stomach, or the Spawn of a Pike.

SECTION II.
I HAVE already observed, what Pastures are proper for making of Cheese, and have directed such *Recipe's* as a Farmer may safely follow in the Dairy Practice that Way; I shall from hence now speak particularly of Cream and Butter, and how to order them.

WITH

WITH regard to Cream, we think it necessary to give the Reader the following Observations.

IN *April*, when the Cows go first to Grass, about twelve Quarts in a Day, *Winchester* Measure, is good Milking for a New-milch Cow ; and this, if well skimmed, yields about a sixth Part, or four Pints of Cream, which will make almost two Pounds of Butter.

IN the best Butter-Countries, they churn twice or thrice in a Week, taking off the Cream with a Fleeting-Dish every Morning, and putting it into glazed earthen Pans, which keeps it from souring, and makes it bring the best Butter.

IN other Places they use Leaden Cisterns, and in some Brass Vessels, which are apt to give the Milk an ill Taste. But to make Butter in the highest Perfection, I would advise every Master or Mistress of a Dairy to set their Milk always in glazed Vessels, and keep their Cream to the churning Time in Pans or Pots of the same Sort. But for want of these last Vessels sufficient to contain the Cream of a large Dairy of Cows, the Leaden Cisterns are frequently used ; but if the Cream remains there too long, the Butter will be certainly rancid, and have an ill Flavour. But where they use Brass Vessels, as they do in *Devonshire*, to set their Milk in, the Cream is much sooner changed.

It was in some Parts of the West of *England*, a few Years ago, very difficult to meet with one that knew what a Churn was ; and I believe I was the first that introduced an Engine of that Kind into the Neighbourhood of *Exeter*, as well as Laying aside the Brass Vessels of the Dairy, and exchanging them for those made of Earth. I found that it was not a little difficult to get over an old Custom ; but at length they took the churning of Butter to be preferable to the old accustomed Way they had of raising Butter over the Fire in a brazen Kettle.

It is sometimes difficult to have a Dairy so disposed, that it may be cool enough in Summer, to raise and keep the Cream in good Order, and warm enough in Winter to do the same Thing ; by which, we may suppose, that there ought to be a certain Temperature of Air, or Degree of Heat, to divide the oily or buttery Parts from the aqueous or watery Parts of the Milk.

In hard Winters, when it has been difficult for Cream to rise upon the Milk, or even to churn that Cream into Butter, a Lady of my Acquaintance in *Essex*, had the good Fortune to judge so philosophically on this Occasion, as to have all her Dairy removed into a Vault under Ground, where the external cold Air was excluded ; by which Means, the Cream of the Milk did rise in as great Quantity, and in the same Time, as it used to do in Summer ;

Summer ; nor was the Butter longer a coming in the Churn, in the most severe Weather in that Place, than it used to be in the Summer-Season in the Dairy.

I CANNOT help remarking a merry Passage on this Occasion, given me in a Letter, where it was said, that in cold Weather, when Butter would not come easily by churning, if any Passenger would fling a Shilling into the Churn, while the Operator was at Work, the Butter would immediately appear ; but if I can be a Judge of the Reason why this happens, it is, because the Person who is employed in this Affair will labour more heartily in that Work, in order to come at the Shilling, as soon as possible, and by their extraordinary Labour bring the Cream into such a Degree of Warmth, as will separate the oily from the watery Parts, which is the Occasion of producing Butter, which is in some sort a Solid, from Milk, which was a Liquid before.

THE Time of churning should be early in the Summer-Season ; because too much Heat will prevent the separating of the Butter from the Milk, as well as too much Cold will prevent the same in the Winter. Some will set their Churns, in the Winter, near the Fire, while they are churning, to bring the Butter the sooner ; others will warm their Churns with hot Water, before they put the Cream into them ; others, during the Time of churning, will set their Churns in Vessels of hot Water:

Water : But I approve extreamly of the Method of churning, when the Weather is cold, in a warm Vault, because it saves Abundance of Trouble; and, besides, the Milk being set there for Cream, will not turn *rank* or rancid, as Butter that is made otherwise, will do.

If you will give me Leave to introduce another Piece of Superstition, which is as merry as that of tossing a Shilling into a Churn, which tends to make the Dairy-Maid industrious; in some Countries it is said,

THAT if the Cows be not milked by the Time the Herdsman blows his Horn, it spoils the Dairy-Maid's Marriage; and he blows about Sun-rising.

IN a great Dairy they sometimes put into a Churn about the Bigness of a Barrel, two and twenty Gallons of Cream, which fills two Thirds; this, with the Labour of a lusty Man and Maid, comes to Butter in about Half an Hour's Time, more or less; in hot Weather it is soonest, in cold Weather it is longer; but if the Cold be mended much by Fire, it changes the Butter, in Taste, Colour, and Stiffness; but to be in a Room a Yard and a Half distant from the Fire, does well; but in very cold Weather, they put boiling Water in the Churn, till it thoroughly heats it, as Mr. S--- T--- directs; which is, in a Manner, the same as we have said above; and that being taken out, they put in the Cream. These two and twenty

ty Gallons, or an Hundred and seventy-six Pounds of Cream, yield generally about seventy Pounds of Butter, which is about seven Parts in eighteen.

At this Time one will churn by help of a Sweep, which is a Thing like a Pump, and others use Barrel-Churns, and reckon them best; and one that keeps sixty Cows in *Denny*, a near Town, has a Barrel-Churn that holds a Hoghead, which, if any please, they may call a Hoghead-Churn.

In *Cambridgeshire*, when the Butter is Come, it is taken out and washed, if for present Use, otherwise not; and with a Fleeting-Dish is drawn backwards and forwards in a Bowl, a little at a Time, to let out the Butter-Milk; and the cleaner that is got out, the better is the Butter: Then it is salted, and a Quart of Salt, which is about the fifteenth Part, will serve thirty Pounds of Butter; but some put more or less; and when salted, it is drawn over again with a Fleeting-Dish once or twice, then weighed into Pounds, and rolled into long Rolls of three Quarters of a Yard or a Yard long; then in hot Weather it is put into a Basket, and hung all Night in the Well, within a Yard or a Yard and a Half of the Water; which will make it stiff: And in these long Rolls it is carried to Market, for to be cut into such Sizes as are thought proper.

In the same County, at *Over* especially, they keep a middling Sort of Cows, sell many off at *Michaelmas*, and buy others that will calve in every

every Month of the Winter, that they may have Butter enough to serve the Colleges; and by Hay-feeding, they have almost as much Butter in Winter, as in Summer, and as sweet and yellow, (for New-Milch Cows make yellow Butter) as others generally have in *April*: And the Butter of this Town is commonly sold in Summer for Six-pence, and in Winter for Six-pence Half-penny a Pound, which is a Half-penny more than they sell it for in other Towns. The Curious always enquire for *Over-Butter*; and there is no more sold than sixteen Ounces to the Pound.

THE Butter made in this County will not keep so long as *Suffolk-Butter*. But the Mistress of a famous Dairy, who lived there, used to make her Butter in Balls of thirty or forty Pounds Weight, and salt it a little more than for Fresh Butter; and this she laid in the Middle of a Bin of Flower, and it would keep good all the Winter. Others salt it as usual, and put it into Pots, covering it about two Inches high with good Brine. But this will not keep so well as the other.

SOME People drink the Butter-Milk, but the Hogs have the greatest Part of it. If it stands long, it will turn soure, and in a Week's Time, there will arise from five or six Quarts, a thick Skin, or Top, as thick as one's Finger, and under it will be a very clear blueish Whey, and at the Bottom a thick Curd, but not like Cheese-Curd; it is knotty, and very slippery.

SOME of the poor People make Cheese of this Butter-Milk ; but it is very tough, and must be eaten while it is fresh. The Whey that comes from it, is very thin, soure, and green, and the Hogs care but little for it.

SWEET and new Cream will make very pleasant Butter for present spending ; and if it stands till it is soure, the Butter will be very good, and keep longer, if it be not over-heated in the Churn : But if it once turns bitter, it is good to spend it presently, for it will soon decay.

AT the Fall of the Leaf, and in cold Weather, Cream will turn from sweet to bitter ; and the Reason is generally said to be, because the Cattle eat the Leaves of Trees : But I am not of this Opinion, seeing it will be so in low Grounds where there are no Trees, as well as in high Grounds where there are. However, the best Way to prevent this Bitterness, is, by setting the Milk a less Time, and churning oftener ; but this will produce but a small Quantity : And it is best to sell and spend it new, and not to pack it up in Firkins ; for it will not sell in *London*, but the Traders are forced to ship it off ; which disparages our Country, and does great Damage to Trade.

SOME churn New-Milk, which makes the best Butter, but it will not keep. If Salt-Butter be well

well washed, and then beaten up with New-Milk, it will taste like Fresh-Butter.

THE *Irish* rot their Butter, and in hot Countries they clarify it: But the Taste of such is not agreeable to others, who do not imitate them.

IN *Holland* they make their Butter in large leaden Cisterns, (where the Dairy is supported by five, six, or seven Hundred Cows) the Cistern sometimes containing about two or three Hogsheads of Cream. In some Places they are set quite in the Ground, and in others a Foot of the Height appears above the Ground; these, however, are circular on their Tops, and at the Bottom of them, in the Center, is placed the Point of a Beam, or large Timber, which is erect, and reaches to the Ceiling of the Room, where, in a cross Beam, there is a Bolt and Swivel, so that the upright Beam may be turned by an Horse, with a Leaver, as in common Horse-Mills.

IN the upright Beam, so far as it is within the leaden Cistern, must be placed cross-ways, Stakes or Bars of Wood, at four or five Inches Distance above one another, long enough, each of them, to reach within four or five Inches of the Sides of the Cistern, much after the Manner of a Chocolate-Mill; and the Beam being turned by an Horse traced to the End of the Leaver, as in other Horse-Mills, will bring the Cream put into this Cistern to be Butter.

BUT in a Case of this Nature, where a Horse-Mill or Horse-Churn is employed, the Horse should not be too speedily drove about, lest the Butter becomes oily; but a little Experience may teach us what Time is requisite to be observed in the Motion.

I GUESS, that the too violent or quick Motion of these Horse-Mills for Butter in *Holland*, occasions the Oilyness of the Butter there, more than in other Countries, where they churn by Hand, or make it in Kettles over Fires. However, where the Quantity of Cream is so great as what I have mentioned above, the *Dutch* Butter-Mills save a great deal of Time and Labour.

It is observable, that whenever Butter begins to turn oily, it at the same Time begins to be disagreeable to the Taste, and becomes rancid more and more, as it is kept; which nothing can recover but frequent Beating and Washing in Salt and Water. This has been experienced by several of my Acquaintance, who after a Week's Making of Butter, have had it change to so ill a Flavour, that the Markets would not receive it, and has been fit for no other Use, than to serve as common Grease for Wheels of Carriages, or in working of Wool.

I FIND, that if we propose to have good Butter for Winter Use, to be salted or laid up, it is best made when the Cows feed upon the *Rowings*, or

After

After-Maith, or *After-Grass*, which is that Grass which next follows after the Hay is got in ; and this is most commonly about *July*, *August*, or till the Middle of *September*, according as the Season or Situations happen to be ; but all Butters made at such Seasons, must be well cleared of the Butter-Milk, if we design to salt them to keep in the Winter.

IT is the Butter of this Kind which some People in *London* might make a tolerable Livelihood of, by washing it from the Salt as they were disposed to use it, either in their own Families, or to send to the Markets, either in Rolls or Dishes: But it must be remarked, that it will keep much the better from the Time of the first Making, to the Time of Use, if we preserve it in Casks or such Vessels where the Air cannot enter ; and such Vessels, likewise, ought to be kept in a cool Place.

I HAVE known Butter preserved in this Manner, which has been so ordered by a dextrous Hand in *London*, that it has been sold for two and twenty Pence a Pound, being prepared in little *Patts*, and sold in Pennyworths : and these have even excelled the best Butters that have been brought to Market in Winter, of the Winter Make: For, as I have observed before, the Food which the Cows have in Winter, does not produce so sweet a Milk as that of the natural or free Grass of the Summer: And, moreover, the forced Methods commonly used to

bring the Butter in Winter, by churning too near the Fire, is apt to change the Butter very soon.

N. B. THE Directions I have given above of keeping our Dairy under Ground in Vaults or close Cellars, during the hard Weather of the Winter, may be of great Use to those who have Dairies, and bring Butter to the Markets all the Year round.

IT is a Custom among some curious Dairy-Men about *London*, when their Salt-Butter has been duly washed, to beat it up with New Milk; and it is likely that Method may be of some Service in bettering the Taste of the Butter.

I HAVE now given the best Instructions I can, with Regard to Butter; and have no more to say in this Section with Respect to Cows, but that the Butter-Milk is esteemed in many Countries to be both a pleasant and nourishing Drink. Give me Leave, however, before I enter upon the third Section, to insert what I have just met with of Mr. *Fitzherbert's*, the old *English* Writer of Husbandry, concerning Calves; for what relates to the Calf, has no small Regard to the Cow. Mr. *Fitzherbert's* Words are as follows.

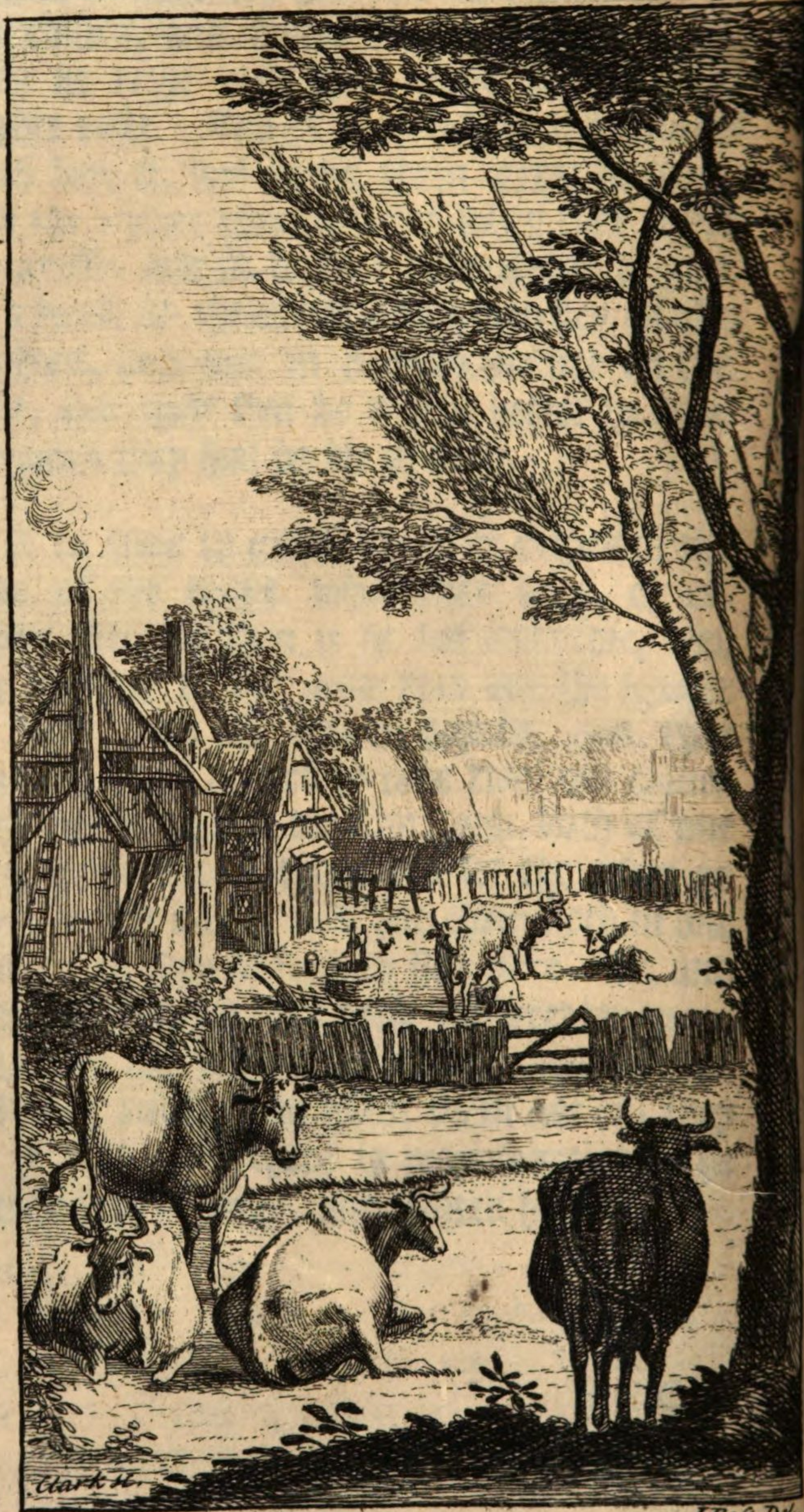
‘ It is conuenient for a husbände to reyre
 ‘ calves and specially those that come bettwene
 ‘ Candelmasse and May, for that season be
 ‘ maye

maye spare mylke best, and by that tyme the
 calfe shal be wayned there wyl be grasse
 ynoughe to put hym vnto. And at wynter
 he wyl be bygge ynoughe to saue hymselfe
 amonge other beastes, with a lytle fauour.
 And the dam of the calfe shal bull againe and
 byng an other by the same time of the yeare,
 and yf thou shalte tary tyl after May, the
 calfe wolde be weake in wynter, and the dam
 wolde nat bull agayne but ofttymes go bar-
 ren. And if thou shalt reyre a calfe that co-
 meth after Mighelmas, it wyl be costly to
 kepe the calfe all the wynter season at heye,
 and the dam at harde meate in the house as
 they vse in the playne champion countreyes.
 And a cowe shall gyue more mylke with a ly-
 tell grasse and strawe lieng without in a
 close, then she shal do with hey and straw
 lyeng in a house, for the harde meate dyetch
 up the mylke. But he that hathe no pasture
 must do as he may: but yet it is better to
 that husbande to sel those calues then to reyre
 them by cause of the cost, and also for the
 profyte of the mylke to his house, and the
 rather the cowe wyl take the bull. If the
 husbande go with an ore ploughe, it is con-
 ueniente that he reyre two ore calues, and
 two cowe calues at the lesse to uphalde his
 stocke, and yf he may do mo, it wyl be more
 profyte. And it is better to weyne the calues
 at grasse thenne at harde meat if they went
 to grasse before. And that man that may

' haue a pasture for his kye and another for
 ' his calues, and water in them bothe, then
 ' may he reyre and brede good beastes with
 ' lyghte coste. And yf thou wayne thy calues
 ' with hey, it wyl make them great bellyes,
 ' and the rather they wyl rot when they come
 ' to grasse, and in wynter they wolde be put
 ' in a house by themselfe and giuen hey on the
 ' nightes, and put in a good pasture on the
 ' daye, and they shal be muche better to han-
 ' del when they shal be kie or oren.

' It is time to gelde his oren calues in the
 ' olde of the mone, when they be x. or xx.
 ' dayes olde. for then it is lest ieoperdie, and
 ' the ore shal be the more hyer and the lenger
 ' of body, and the lenger horned, and that
 ' may be well proued to take two ore calues
 ' both one kinde one making, and both of one
 ' age, gelde one of them and let the other go
 ' forth and be a bul. And put them both in one
 ' pasture til they be four or fiue yere olde, and
 ' then shal ye se the ore calfe far greater euery
 ' way then the bul. There is no cause but the
 ' gelding, and if thou gelde them nat till they
 ' be a yere olde, there is more ieoperdye, he
 ' shal be lasse of body, and shorter horned.

SECT.



Clark H.

J. Roß, Del.

S E C T. III.

Of Oxen, or such Cattle as we would break for the Goad, or Yoke, or for Draught.

ALthough I have spoken above of the Spaying of Heifers to fit them for the Draught, yet Oxen are certainly the better for that Use. To break them to the Yoke, we may use various Ways, *viz.*

IF we take young Steers from the Forest or Common, put them in a large Stable or Barn, where the Breaker may easily pass to and fro by the Beast, without Danger: Before this Stable should be a large Close or Field, where the Steers may have Liberty enough, and the Door of the House always open, for them to go in and out at Pleasure.

IN the Stable, set up such Stalls as may be made in the Manner of Yokes, between six and seven Foot from the Ground, where there should be provided such Fodder for them as one may judge may be the most agreeable; the Herb called the *Lucerne*, is what I find all Cattle of this Sort chiefly delight in, which will by Degrees entice them into the Stable. But if they do not come of their own Accord, let them be taken up and brought to their Provender, and tyed to the Stalls; and if they should then prove rusty or stubborn, tye them

them to the said Stalls for 24 Hours, without any Meat: After which, let their Breaker offer them a little Meat, holding it directly before them, and speaking gently to them at the same Time; and if they receive this, let him give it them side-ways, stroking their Backs, and their Muzzles, and cherishing them with some Words which he designs afterwards to use constantly. In the mean Time, the Keeper must take care of their Horns and their Heels, that they are not provoked in either; for if they once get the Tricks of Kicking or Tossing, they will never leave them.

WHEN these Steers begin to be a little acquainted with their Keeper, he may rub their Mouths with Salt, and give them some Balls of salt Tallow, which he must stroke down their Throats or *Dewlaps*, giving each of them, after that, about a Pint of White Wine, of the best Sort; or, in lieu of that, about the same Quantity of well-brewed Ale, that has no Yest in it: This in two or three Days will make him familiar.

SOME use to yoke two of these together, and let them draw some light Thing, as a small Plough or Harrow, over light sandy Grounds, after they have been already prepared by the Plough. But the Cattle that are thus treated, must be already inclinable to Tameness.

ANOTHER Way is, when we have brought them to feed at the Stall, to yoke them with an
Ox

Ox that has already been used to the Goad, or Draught: Sometimes the Steer in this Case, will lie down in a Furrow; and then it will be necessary to have Patience enough to let him lie, without beating, till he gets up of his own Accord; or if he seems too stubborn to rise after a Minute or two, tye his Feet together, but with so much Caution, that the Thongs or Cords do not hurt him, unyoking him from the other Ox, and let him there lie for some Hours without Meat, offering him at length, a little out of your Hand, which, if he receiveth freely, you may venture to unbind him. The best Meat for this Purpose, is the *Lucerne*, *i. e.* any of the three large Sorts; though the purple-flowered Kind I suppose they will receive with more Pleasure.

IN inclosed Lands, and especially where Dairies are frequent, young Steers and Heifers are gentle and familiar from the Beginning, being brought up constantly with the Herd; and, if brought acquainted with their Governours in a familiar Way, will more easily receive the Yoke than those of the Forest or Open Countries, which have had less Knowledge of Mankind.

N. B. THE Spayed Heifers which may be designed for the Yoke, must be treated in the same Manner as the Steers, to subject them to the Draught.

SECT.

S E C T. IV.

Of Ox-Stalls, their Situation, or Manner of Structure.

IT is necessary, when we build an Ox-Stall to the best Advantage, to consult chiefly the Situation, that it lie dry, and be not too much exposed to the Sun, or Heat of the Weather. Some Authors have commended the Pavement to be of *Stone pitched*; but the best Way is, to lay the Floor with small *Dutch Bricks*, such as are called *Clinkers*, set edge-ways, which are commonly used for Floors or Pavements of Stables.

THESE Floors should be laid slope-ways, as is commonly practised in Stables for Horses, to carry off the Wet; and the Windows should by no Means be to the South, for then the Heat would be too great for the Health of the Oxen. What Openings or Windows we make in such Places, should rather be to the North, or to the East, that they may have some little Benefit from the Morning Sun, and from the cooler Air of the Day in Summer. The Doors in the Front should be large, and in Winter they may be sometimes open, to let in the Sun, or warmer Air.

THE Stalls should be eight Foot wide, that they may have Room enough to lye in, so as the pregnant Cows may not hurt one another, nor the stronger

stronger Ox wrong the weaker ; and that there may be Room enough for their Keepers to come about them, and for yoking them.

S E C T. V.

Of the Feeding of Oxen.

A Learned Nobleman of Germany, *Conrado Heresbatch*, lays down good Rules for the Feeding of Cattle, in the following Manner.

CATTLE which you intend to feed and make fat, either for Purse or your private Provision, must be fed upon your best and most fertile Grounds ; and in the ordering of these Grounds, there are divers Things to be observed : As, first, that they be well fenced ; then well stored with Water that is sweet and wholesome : For howsoever the Ancients hold Opinion that these Cattle delight in troubled Waters, yet Experience shews us, that putrified Waters breed mortal Diseases.

THEN that they lie free from Inundations.

AND that those Pastures which you lay and give Rest to from the Beginning of *November*, you may graze at *Candlemas* following, with holding Cattle or Beasts beginning to feed, but with your fat Cattle not till *Lady-Day*.

THOSE

' THOSE Pastures which you lay or give Rest to
 ' at *Candlemas*, you may graze the *May* following;
 ' and those which you give Rest to at *May*, you
 ' may graze at *Midsummer*; those you lay at *Mid-*
 ' *summer*, you may graze at *Lammas*; and those
 ' you lay at *Lammas*, you may graze in *October*,
 ' and generally all the Winter following.

' LASTLY, you may observe, that those Pastures
 ' which lie most in Danger of Water, or any o-
 ' ther Casualty, should be first eaten, lest by too
 ' long delaying an unseasonable Time come, and
 ' so you be prevented both of your Hope and
 ' Profit.

' Now in the Eating of your Pasture-Grounds,
 ' there are also many Things to be observed: As
 ' first, in the Feeding of your Fat Cattle, you
 ' must by all Means provide that they have full
 ' Bite, which is to say, Length of Grass, or full
 ' Grass; for Cattle whose Tongues are the prin-
 ' cipal Gatherers up of their Food, neither can
 ' nor will bite near the Ground, unless extream
 ' Hunger compel them; and then they take little
 ' Comfort in their Food.

' NEXT you shall often (as any fit Occasion will
 ' give you Leave) remove and shift them into
 ' fresh Grounds, and not expect that they should
 ' eat your Grounds down to the Bottom, but on-
 ' ly, as it were, skim and take the uppermost and
 ' choicest

' choicest Part of the Grafs, and so they will feed
 ' both swiftly and thoroughly; and for that Grafs
 ' which they shall leave behind them, you may
 ' feed it after them with your labouring Cattle;
 ' and lastly, with your Sheep.

' IT is very good, also, amongst your fat Beasts,
 ' to have some few lean Horses; for your fat
 ' Beasts delight to feed with them, and sometimes
 ' to bite after them, there being, as it were, a
 ' Kind of Sympathy or Liking of each others
 ' Breaths.

' AFTER your Grafs is fully knit, and hath re-
 ' ceived its whole Strength, which will be about
 ' *Midsummer*, then you may suffer your fat Beasts
 ' to eat a little nearer to the Ground till after
 ' *Lammas*, because there is an extraordinary
 ' Sweetness in it.

' THESE few Observations, well kept, there is
 ' no Doubt but your Cattle will feed to your own
 ' Content.

' THEN when you see they are sufficiently fed,
 ' according to your Purpose, whether it be for the
 ' Use of your Household, or the Use of the Mar-
 ' ket, you may forthwith employ them according-
 ' ly. For it is both Loss of Time and Money,
 ' not to put them off by Sale, or otherwise, as
 ' soon as they are come to the End of your De-
 ' sire.

' FOR

' For those rich Grounds will sometimes make
 ' two Returns in a Year, and sometimes three,
 ' which is a great Profit; and I have heard some-
 ' times of four, but it is very rare: And the Cat-
 ' tle so returned must be very well fleshed before
 ' they be put to Feeding. But if your Ground
 ' will return lean Beasts twice fatted in the Year,
 ' it is sufficient.

' Sell or kill your Cattle when they are fat;
 ' and if you have not the Art and Skill to know the
 ' same, you may observe these Rules following.
 ' First, when you see your Beast, in the general
 ' Shape and Composure of his Body, shew most
 ' fair and beautiful, each Member being comely
 ' and each Bone covered so as a perfect Shape re-
 ' quires, you may then judge the Beast to be well
 ' fed; especially when you see his Huckle-Bones
 ' round, and not sharp; his Ribs smooth, and not
 ' rough; his Flanks full, his *Nack* thick, and his
 ' Cod round. When you perceive this, you may
 ' handle him, and feeling him upon the nethermost
 ' Ribs, if you perceive the Skin loose and soft under
 ' your Hand, you may be well assured that the
 ' Beast is well fed outwardly, that is, upon the
 ' Bones. You may then lay your Hands upon his
 ' round Huckle-Bones, and if they feel soft, round
 ' and plump, you may be assured that the Beast is
 ' well fed both inwardly and outwardly, that is,
 ' both in Flesh and Tallow. Then you may han-
 ' dle him at the Setting on of his Tail, and if that
 ' feels

‘ feels big, thick, full and soft, it is a true Sign
 ‘ that the Beast is very well fed outwardly. Then
 ‘ handle his *Nach-Bones*, which are on both Sides
 ‘ the Setting on of his Tail, and if they feel soft
 ‘ and loose, it is a Sign that he is well fed.

‘ LASTLY, you may handle his Cod and Navel,
 ‘ if it be an Ox, and the Navel only, if it be a
 ‘ Cow; and if they feel thick, round, soft,
 ‘ large and plump, it is a certain Sign that the
 ‘ Beast is well tallowed within.

‘ WHEN any of these Parts or Members handle
 ‘ contrary to the Rules above given, you may
 ‘ then make a contrary Judgement.’

BUT let us feed our Cattle never so well in the
 House, or at the Rack, we must have as great Re-
 gard to their Feed in the Field, and especially at
 the Time when we have first put them to fresh
 Grass; for on that Occasion, both Oxen and
 Cows will be subject to Distempers.

IT is necessary, likewise, in Winter, to take
 Care that they are not fed too sparingly, or kept
 too low in their Diet. It is also necessary, at that
 Season, to give them Plenty of Litter, especially
 when they come from Labour; as also, to rub
 them, and dry them well, stroking their Hair
 smooth, and raising gently the Hide from the
 Flesh.

WHEN they come from Work, or out of the Pasture, you must wash their Feet well with Water, before you bring them into the House, that the Filth sticking to them may not breed Diseases, nor soften their Hoofs. You must take Care of extream Cold or Heat, for too much of either fills them with Diseases. You must take Heed that they be not chaced up and down, especially in hot Weather, for that gives them the Fever, and oftentimes the Flux.

TAKE Heed, also, that neither Swine nor Poultry come near their Stalls ; for the Dung of either of them poysons the Beast. You must also remove all manner of Carrion, and bury it, for fear of infecting your Cattle.

IF the Murrain happens to come amongst them, you must presently change the Air, and place them far asunder, in divers Pastures, keeping the Sound from the Sick, lest the Infection spread in the Herd ; neither suffer such as are infected, to feed or drink with the rest.

THE next Creature to the Bull or Cow, common with us, is the *Buffalo*, or *Bubalo*, or, as some call it, the *Buff*. This Sort of Cattle is very common in *Italy*, and is of a more wild Disposition than the Kine with us. Some of them are now in the *Menagerie* near *Kensington-Pallace* in *Hyde-Park*, and likewise in the *Menagerie* of the Earl of *Bur-*

Burlington at Chiswick. They are of a very fierce Nature, which occasions the People abroad who bring them to Service, to ring their Noses with Iron. They are used for Carriage and Draught, like the Ox.

THE *Buffalo* is commonly, if not always, of a black Colour, his Body large, his Legs well set, and strongly knit in the Joints; but in Respect of his Height, his Body is short, his Horns large and black, his Hair fine and short, and his Tail small. The Milk of the Females make Cheese of good Esteem in *Italy*.

N. B. BEFORE I conclude this Section, I must again repeat, that when we buy Cattle, whether Cows or Oxen, they ought to be young; otherwise to be brought from a poor to a better Pasture, else the Farmer can never thrive.

S E C T. VI.

Of the Use of the Several Parts of Kine, and how far they are profitable.

THESE, next to Sheep and Hogs, are remarkable for having every Part about them beneficial to the Farmer; viz. the Flesh, the Tallow, the Hide, the Hair, the *Inwards*, the Bones, the Dung, and the Horns; besides all o-

ther Advantages commonly known with Regard to this Kind of Cattle.

THE Flesh, every one knows, is the common or grand Food of *England*, and is of principal Use to Sailors, who serve in the Way of Navigation, which this Nation, particularly, so much depends upon; but the Curing of this Flesh for the Seas, would require the Skill of a good Philosopher; for it is not enough to put Salt on Beef for Shipping, but to see that the Beef be perfectly cured by Salting.

THIS is a Matter which I have frequently thought of, and shall some Time or other, when I have made Experiments enough, hand to the World. In the mean Time, I shall only take Notice of preparing Beef after the *Dutch* Manner, which is partly cured by Drying.

The Method of preparing Dutch Hung-Beef.

IT is a Custom in *Holland*, about *September*, to kill Cows or Heifers, and cutting the Flesh to pieces at Pleasure, of such Weight in every Piece as may be most commodious to a Family, lay them in a Brine I shall mention hereafter.

WHEN your Beef is dissected to your Mind, lay the several Pieces, according to the Bigness, in the Brine; then take them out and salt them well, with

with equal Quantities of Bay-Salt, Rock Salt-Petre, and Petre-Salt, for a Week or a Fortnight; then roll it, and wrap it in three, four, or five Sheets of Brown Paper if you burn Sea-Coal; and hang it in the Chimney, where it may be neither too hot nor too cold. Turn it every Day for a Week, then once in two or three Days, till it is well dried; then use it, or keep it in a dry Place.

If you hang it by a Wood-Fire, it needs no Paper. It may be dried with Saw-Dust, as Neats-Tongues are; but it will not be so white,

In *Holland*, and many other Places, they use *Peat*, or *Dove-Coal*, or *Turf*.

THE Pickle or Brine is made thus; Take four or five Handfuls of Common Salt, three Handfuls of Bay-Salt, and of Rock-Petre, and Petre-Salt, of each one Handful; boil these in Pump-Water to a full Height that will bear Eggs; when it is cold, put in half a Pint of the best Vinegar, which will make your Beef tender.

In the North of *England* Neats-Tongues, which are yet a Part of the Cow or Ox, are potted thus; Salt them with Common Salt, Petre-Salt, and some Salt-Petre, which will make them look red; when they are salted enough, *i. e.* (about ten Days) half boil them, then skin them, as some of the very curious do in those Parts, (though I have found them do very well without using that Me-

thod) and season them high with Spice, then bake them till they are very tender, and drain them well, packing them close, and covering them with the best melted Butter. When the Butter is cold, tye them well over, and keep them for Use.

BUT it is a common Way in *France*, where Tongues are thus prepared, to clean and moisten Ox's Bladders in warm Water, and draw them over the Tongues, while the Bladders are yet moist; and by this Means they will keep a long Time in good Condition, and prove very tender, when we use them at the Table.

Of Tallow.

THE Tallow of this Kind of Cattle, after it is rendered by boiling, or refined and rectified, brings a very considerable Advantage to the Nation in general, from its Use for making of Candles, while the worse Parts of it are employed in Grease, on the Account of the Woollen Manufacture; and many other Uses in Husbandry, &c.

ON the Candle Account the Government or Nation lately have received a considerable Revenue.

Of Hides.

THE Hides of these Creatures are a great Advantage to private Persons, as well as to the Publick;

lick ; by employing great Numbers of People, and raising great Estates, as well as levying great Taxes, when they are well dressed and tanned.

THE Hides of our Country are not perhaps the third Part of what are used with us ; for we have at least two Thirds more than our own Product brought from foreign Countries, to supply the several Trades that are employed in the Manufacture of Leather, whether among the Shoemakers, Harness-makers, &c.

THE Hair which is taken from these Hides by the Tanners, is of Use to the Plaisterer in binding his Plaister for lining the Inside of Houses, as well as for many Uses besides, which are commonly known.

Of the Inwards of the Ox or Cow.

THE Inwards of the Ox or Cow, are for the most part cleaned and sold by the Tripe-Men in the Markets, as a proper Victual or Diet for Mankind ; and many good Fortunes have been raised by the preparing of them.

Of the Bones of the Ox or Cow, their Use.

THE principal Bones of these Animals being broken and boiled, yield a Grease which is of great Use in several Cases ; and the Bones afterwards burnt, are serviceable to the Refiners, or

Essay-Masters; for it is with them they make their *Cuppells* or *Tests*, wherein they refine their Metals. Also, these burnt Bones, when they are only burnt to a Blackness, make a good Sort of Printing-Ink, as I am informed by Mr. *John Pingo*, a celebrated Alchymist, and curious Philosopher, in *New-Street* near *Shoe-Lane*, *London*.

Of the Dung of Kine.

THIS Dung is in its Use, when we apply it to Manuring of Soils, of a cool Nature, and being very fine in its Parts, will help to open a stiff Soil, when it is well dried, or has lain some Time in a Heap.

WHILST the Dung is fresh, it is of great Use in making the Cuttings of Plants strike Root; for it keeps the Cuttings cool and moist till they have been long enough debarred of the common Air to make their Shoots under Ground; and by its Means I have raised many Plants which I could never get to take Root in the common Earth.

IN *Lincolnshire*, and many other Counties in *England*, the Dung of these Animals, when dried, is used by the common People for Firing.

IN most Farm-Yards where Cows are kept, it is customary to bed those Yards deep in Straw, which together with the Dung and Urine of this Sort of Cattle, is judged to be an excellent Manure for
stiff

stiff Lands, the Straw being first rotted or reduced to the State of Earth.

Of Urine, and its Analysis.

THERE has been a Doubt whether there are vinous Spirits in Urine. But in order to an Enquiry to be made after those Spirits in Urine, it was judged proper to take a large Quantity of Urine made by a Person of a strong Constitution, who frequently drank great Quantities of vinous Spirits.

FIRST of all, his Urine was examined, after a previous Fermentation; and next by an immediate Distillation at the Flame of a Lamp: By the first Method was gained some volatile urinous Salt, without the least Drop of any vinous Liquor or *Efflu-
vium*; by the other was recovered only insipid Water.

IN a farther Analysis or Separation of the Parts of Urine, were discovered two Sorts of volatile Salt, and two Sorts of Oils; one that sinks in Water, the other that swims. Also a true Marine Salt, suspected not to be found in the Urine of Animals that use not to eat Salt.

IN the last Place, with no small Care and Industry, a shining white Vapour was brought over the Helm, which without Addition may be brought into the solid *Phosphorus*.

I THINK

I THINK, from hence, we may conclude, that let any Creature drink what Liquor they can bear to receive, or in whatever Quantity, yet neither from them, nor their Parts, nor any Thing that is animal, will arise one Drop of vinous Spirit, except this *Phosphorus* must be reckoned such; though its coming last does not quadrate with the Character of vinous Spirit, especially if we consider what Dr. *Willis* has said of Urine, where he informs us, that

WHEN the Urine, either fresh or putrified by a long Digestion, is exposed to Distillation, first ascends whatever of a vinous Spirit is in it, diluted with Water, but in so small a Quantity as is not easily perceived, even by Taste it self: This is followed by a large Proportion of watery Liquor, with which are mixed some more loose Particles of Salt, and Sulphur especially. Thirdly, comes a very penetrative Water, commonly called Spirit of Urine; but in Truth, almost without any vinous Spirit, and is chiefly Phlegm highly sharpened with Salt; and therefore it ascends last, as in the Distillation of Vinegar, and is very acid.

IT is a Sign that this Spirit owes its Sharpness chiefly to the Salt; because, though it is most subtle, it will not take Fire, but extinguishes it. When all Moisture is gone, and a more hot Fire made, another Salt will arise into the Alembick, and leave only the earthy Dregs.

THIS

THIS plainly shews, that the Parts of Urine are much Water and Salt, a little Sulphur and Earth, and a very little Spirit.

HERE I must observe, that the ingenious Doctor, agreeably to his five Principles of *Spirit, Salt, Sulphur, Water, and Earth*, speaks of a vinous Spirit in Urine, but so little as is not easily perceived; and of the penetrative Water, almost without any vinous Spirit, and says that it will put out Fire; and that Urine has but a very little Spirit; and truly, so little, that Mr. Boyle thought it had none at all: For if Blood has none, Urine, which comes from it, can have none; for that which has not, cannot give.

AND Mr. Boyle says, in his *History of Human Blood*, p. 104. as follows:

‘By what I have yet tryed, I am not much encouraged to expect from *Humane Blood* a *Vinous* or *Ardent Spirit*.’ And in p. 107. though he had tryed to ferment the *Serum* with Raisins, yet, says he, when we came to distil the thus-altered *Serum*, the Liquor that first ascended, even with a gentle Heat, did not taste nor smell like a *Vinous Spirit*.

AND Dr. Willis himself, in the next Paragraph, but one, says, ‘The *Saline Recrements* and the *Watery* chiefly constitute the *Urine*.’ And in the

next

next Paragraph he says, ‘ That there is but a very
 ‘ little *Vinous Spirit* in *Urine*; the Defect of it in
 ‘ the Liquor first distilled from it, and the sudden
 ‘ Putrifying of the Urine, seems to shew it.’

BUT whether the Intestine Motion of the Particles does argue that there is some, may be left to Consideration.

N. B. URINES in all Creatures, bear a Proportion in Qualities to one another, and are all useful in some Branch or other of Vegetation.

Of the Horns of Kine.

ACCORDING to the best Accounts we can meet with, the Horns used for Lanthorn-Leaves, and Plates for Combs, are taken from the hollow and largest Part of the Horn, which when cut off by the Workmen, is called the *Bunn*, and the other Part the *Tip*.

THERE is not any Part of the Horn but what is valuable. Besides Combs which are made of those Pieces which the Horners call *Plates*, there are also made Wheels of them for Weavers Looms, with Teeth, after the Manner of a Clock-Wheel. And though it is not practised, yet it is possible that a Jack or Clock may be made to roast a Piece of Meat, or shew the Hour of the Day very well with such Wheels.

OUT

OUT of these *Horn-Plates*, are also made Spectacle-Frames to hold the Glasses; and the round Pieces cut out of the Sight-Holes, are sold for Sixpence a Hundred to the Mop-Makers; which being drove through with a Nail into a Stick, serve to secure the Head of the Mop, in keeping all its Parts together.

THE *Tips* are generally used to make Hafts of Knives; and the Workmen, for their Advantage, divide them into several Sorts, according to their Goodness: The largest and best are used for Crutch-Stick Heads and Inkhorns; another Sort the Cutlers use for Hafts of Knives; the next Sort serve for Inkhorn-Tops; and the hollowest and worst of all, are used by the Bowyers to tip the Ends of Bows. Also, the Cutlers cut off the hollow Part of the *Tip*, for they use but little more than the solid Part, and these Pieces they sell to the Inkhorn-Makers, which make the Bottoms of Inkhorns.

THOSE that are very hollow, and not fit for the former Uses, are used to make Gunpowder-Horns for Fowlers; and Waggoners have them hanging by the Sides of their Waggon, with Grease to liquor their Wheels.

LIKEWISE, those that are very hollow and transparent, are kept to make Drinking-Horns; which is a good Invention; there not being that
Danger

Danger of breaking them, as of some others made of other Materials.

THEY were very much used formerly ; and still are, in the Cellars of some Persons of Quality ; and by Nurses, when they are weaning of Children.

MANY other necessary Utensils are made of Horn ; as Spoons, Butter-Knives, &c. too tedious to be here mentioned.

THE Shavings of Horns will make an excellent Glue, even better than that which is commonly made of the Hides or other Parts of Animals ; Nor is this any thing more strange than the making of Glue from the Gravy or common Juice extracted from Flesh. It will be hard as the Horn it self when it is cold and dry. I have already given an Instance of this Nature in some of my former Works, with regard to the Veal-Glew, or what I have there called Cake-Soup, or Portmanteau-Pottage, invented by a noble Lord, which is such as may be carried dry in one's Pocket, and dissolved in hot Water.

ANOTHER Use which we may make of Horns, and is esteemed the worst of their Parts, is by applying the Shavings of Horn to the Melioration or Improvement of Lands, chiefly such as are sandy and light ; for the viscous Quality of the Horn, as it spreads it self by means of the Wet, will help

to bind that Land which before was too loose; and besides, when the Horn comes to rot, it will yield as much, if not more Profit, to Ground, as other Parts of Animals, abounding very much in such Salts as seem to be the most agreeable to Vegetation.

I SUPPOSE Horns abound in urinous as well as nitrous Salts, both which, from what has been said, may help to confirm that simple Urine is no Enemy to Vegetation; and that every Part of an Animal wherein the greatest Quantity of urinous Salts may be found, must certainly be the most improving to the Growth of Plants, if it is used in Moderation. It may perhaps, if it is applied fresh to some Plants, change their Colour from green to yellow, but they will soon recover, and thrive much better than before.

So the Shavings of Leather, which carry in Proportion the same Quality with Horn-Shavings, are used frequently in *Hertfordshire*, and other adjacent Counties.

THE Hair of these Animals is likewise frequently used in the Manuring of Lands, with good Success.

My Friend Mr. *Pingo*, whom I have mentioned above, tells me, that the famous *Prussian Blue*, which is commonly made of *Bullocks Blood*, may be much better prepared from the Horn of that Creature;

Creature; and I have seen, of the same Gentleman's, some Stamps upon Horn Plates, that have been equal to the best Medals.

S E C T. VII.

Of the Distempers which Kine are subject to, and their Cures.

TH E Distempers of this Kind of Cattle has hitherto been very little considered, and therefore I shall more fully explain my self upon that Head.

Of the Murrain or Plague among Cattle, and the Remedy.

THIS Distemper, which was so raging in the Year 1714. in *Holland, Part of France, England, &c.* destroyed so many Cows, that most of the Dairy-Farmers were ruined by it.

IT was so violent and infectious, that if one had it, all others that came within Scent of her, or even eat where she grazed, were surely infected: It seized their Heads, and was attended with running at the Nose, and a very nauseous Breath, which killed them in three or four Days.

TH E Herdsmen were in Dispute whether it was the Murrain or not, and could not give any Account from whence it did proceed, nor find out any
Remedy

Remedy against it. They only tell us, the unusual dry Summer, and the continued East Winds, were the Occasion of it.

THIS Distemper had been, for two or three Years before it came to us, in *Lombardy*, *Holland*, and *Hamburg*, to the Loss almost of all their Cattle.

THE States of *Holland* caused a Medicine to be published, for the Good of those who had their Cattle thus distempered; but having been tryed here, it would not cure one in seven, but rather increased the Infection, by keeping the distempered Cattle longer alive, (by some Days) than they would have been without it.

IT is remarkable, that no Oxen had this Distemper, but only Milch-Cows, which were more tender than the Males.

THE Herdsmen, to keep their Cattle from the Infection, let them Blood in the Tail, and rubbed their Noses and Chops with Tar; and when any happened to die of it, they were burnt, and buried deep under Ground.

IT began at *Islington*, spreading it self over many Places in *Middlesex* and *Essex*; but did not reach so far Westward from *London* as twenty Miles.

O

THE

THE most general Opinion concerning the Cause of this Distemper, was, that the Cattle were first infected by drinking some unwholsome Standing-Water, where, it is probable, some poisonous Insects were lodged and bred; the Summer having been extreamly dry, attended almost constantly with Easterly Winds, the Grass almost burnt up, and the Herbs of the Gardens almost destroyed by Insects; but such as they were, (unfit for Table-Use) they were given to the Cattle.

THERE was, likewise, so great Want of Water, that many were forced to drive their Cows five or six Miles to it.

THE Electuary published upon this Occasion by the States of *Holland*, was composed of most, if not all the Drugs used in the Medicines that were found most effectual against the Plague among Men; most of which Ingredients we know to be mortal to Insects: As strong-scented Roots and Herbs; but above all, *Aromatick Gums*, and Juices of Plants, as Rhue, Garlick, Pitch, Tar, Frankincense, and *Olibanum*. But I believe, before all others, *Extractions* from the *Cedar*; nothing preserving Bodies from Worms better than that.

BUT to be more particular in the Distemper treated of above, my Reader will give me Leave to mention a *Recipe* which my self was Witness to

to have had the desired Effect. A Woman at *Camberwell*, cured many of her Cows, by giving them once a Week an Infusion of Rhue or Herb-Grace in Ale-Wort; and I found that in other Places where it was tryed, to infuse the same Herb in Ale-ree from Yest, or pure White-Wine, it proved of as great Service.

WHEN I speak of Ale, I mean neither the strongest, nor the smallest Liquors made of Barley, but a middling Drink.

N. B. ONE might add, perhaps, Frankincense, *Olibanum*, or other Aromaticks, to the infused Rhue, but especially such as are bitter in Taste, or have a bitter Scent.

IT has likewise been customary, to boil the Roots and Seeds of Angelica, with the Seeds also of Fennel or of Caraway, in middling Beer, or good White Wine, and give it them in a Draught after the Liquor is strained from the Seeds.

THE common Signs or Tokens whereby a Cow may be known to have the Plague or Murrain upon her, as I observed in the Year 1714, are, That she will have a glanderous Running at the Nose or Mouth, a Swelling in her Throat, and lose her Appetite. Sometimes I have observed the Tongue to swell very much, so as even to start beyond the Muzzle.

WHEN you discern a Cow thus distempered, especially in the Tongue and Throat, take a sharp Knife, and open the Swelling of the Throat four or five Inches in Length, taking out carefully, the Coar, or corrupted Matter, that you will there find, which is commonly of a yellow or green Colour; and washing the Part carefully with fresh human Urine, dress it with a small Piece of fat Bacon, or Hogs-Lard, for two or three Times, stitching up the Wound afterwards with a Shoemaker's End, and rubbing her Nose with a little Tar.

IN the Dressing this Wound, we must observe not to make that Operation above once in three Days.

N. B. WHEN there is no more appears than the Swelling in the Throat, the Distemper is not then infectious.

THE Murrain sometimes attacks these Creatures in their Bowels, their Shoulders, and Hips, so that they have Difficulty to move; and this Distemper is very dangerous.

THE most approved Remedy in this Case, is to boil Anniseeds, Fennel-Seeds, and the Seeds of Angelica, of each Half an Ounce, in a Quart of middling Malt Liquor, till it is strong of the Seeds, and give half the Liquor at a Time to the Beast, sweetened with a little Treacle.

ANO-

ANOTHER Kind of Murrain appears like a *Farcine*, with Pimples over all the Body; and these sometimes will vanish after they have appeared a Quarter of an Hour, and return again. To remedy this, give the Beast the following Medicine, *viz.*

TREACLE, an Ounce; middling Malt Drink, a Quart, free from the Yest; or Ale-Wort, the same Quantity. Let the Liquor be warmed, and the Treacle dissolved, or well mixed with it; adding to it, as soon as cold, half an Ounce of Flower of Sulphur. Repeat this for four or five Mornings, giving a Pint at a Time to each Cow, an Hour or two before you turn them to Grass. Some add to this Liquor, about a Quarter of an Ounce (in each Dose) of the Juice of Crow-Garlick.

THIS Distemper is sometimes so violent upon them, that they can neither hear nor see, and affects them with a Kind of Madness; and, if not taken in Time, proves mortal. It is necessary, when we find a Cow or Ox seized with this Distemper, to remove him immediately from the Herd, to prevent the Infection from spreading; and if any one should die of it, let the Beast be buried, Skin and all, deep in the Ground.

It would not be amiss, if we find that a Beast has been attacked with this Distemper some Time

before we discover it, to rub the Muzzles of the other Beasts with a little Tar; or else give every one a Draught of the Ale, Treacle and Sulphur, above-mentioned.

THIS last Kind of Murrain I guess either comes from Poorness of Diet, or from the Nastiness of their Stalls. It is in some Counties in *England* called the *Poverty-Murrain*, and I see little Difference between it and the Mainge.

IF the Tongues of the distempered Cattle happen to be very much swoln, wash them with Vinegar and Salt twice a Day, till they can get them again into their Mouths, rubbing their Muzzles, at the same Time, with a little Tar, which will prevent the Flies blowing of them, and their being eaten by Maggots.

WHEN this is the Case with them, you may give them necessary Subsistence through the Nostrils with a Horn, till they can take it at their Mouths. Some to reduce the Swelling of the Tongue, will boil Oak-Leaves in Vinegar; or, for want of that, a little Oak-Bark.

WHEN the Distemper called the Murrain, seizes a Bullock in the Bowels, we may perceive it by their hard and painful Breathing.

AMONG other Drinks for this Distemper, the following has proved of great Service, *viz.*

TAKE

TAKE, of Horse-Dung, a Quarter of a Peck ; Rhue, two Handfuls ; May-weed and Ragwort, of each about three Handfuls ; Pidgeons Dung, about three Quarts : Tye the Herbs in Bunches, and put the Dung into a Bag.

BOIL these in five Gallons of middling Ale-Wort, till the Liquor is strong of the Ingredients; then strain it off, and add to the Liquor two Pounds and a Half of Madder, one Pound of Flower of Sulphur, one Pound and a Half of the Seed of Burdock ; with Cummin-Seed and Anni-seeds, of each a Pound. This Drink will serve about eight Bullocks.

BUT it is not only necessary to give these Drinks to Cows or Bullocks distempered with the Murrain, but at the same Time to setter them in the Dew-Lap with the Root of Black Hellebore, or Bears-Foot, as it is called in some Places.

THESE Setters may remain about eighteen Hours or somewhat more or less, according as we see them operate.

WHEN the Setters are taken out, dress the Wounds with Hogs-Lard and Ragwort, beaten and bruised together ; and if the Season of the Year will permit, bleed them at the same Time.

THE Spreading of the Murrain is likewise prevented by Fumigation, either of Tobacco, Sulphur, Unslacked Lime, Garlick, Coriander-Seed, or Wild Marjoram, singly, or all together, laid upon burning Coals in Chaffing-Dishes; those Fires being set at proper Distances, in the Cow-Houses, or among the Ox-Stalls, during the Time the Cattle are abroad; and so that the Stalls may retain some of the Odour of these Ingredients. Frankincense and *Olibanum* may likewise be burnt on this Occasion, and Camphire laid here and there about the several Stalls. But above all, keep their Stalls clean.

MR. *Fitzherbert*, who was the first who writ of Cattle in our Language, gives us the following Account of the Murrain, *viz.*

‘ And yf it fortune to fal murren amonge
 ‘ thy beastes, as God forbyd, there be men
 ‘ ynowe can helpe them. And it cometh of a
 ‘ ranknes of blod, and apereth most comenly
 ‘ fyrst in the hed, for his hed wil swel, and his
 ‘ eyes ware great, and runne of water and froth
 ‘ at the mouth. and then he is paste remedye
 ‘ and wyl dye shortlye and wyl eate after he be
 ‘ sycke. Then slei him and make a depe pyt fast
 ‘ by there as he dieth and cast him in, and co-
 ‘ ver him with earth that no dogges may come
 ‘ to the carien. For as many bestes as feleth
 ‘ the smel of that carien are likely to be infecte;
 ‘ and take the skyn and haue it to the tanner to
 ‘ sel,

' fel, and bynge it nat home for pavel that may
 ' fal. And it is comenly used and cometh of a
 ' great charytye to take the bare head of the
 ' same beast and put it vpon a long pole and
 ' set it in a hedge fast bounde to a stake by the
 ' hie way side, that euery man that rydeth or
 ' goeth that way maye se and knowe by that
 ' sygne that there is sicknes of cattel in that
 ' towneshyp. And the husbandes holde an
 ' opinyon that it shal the rather cease. And
 ' when the beaste is flene there as the murren
 ' doth apere betwene the fleshe and the skynne,
 ' it wyl ryse vp lyke a ielly and froth an ynch
 ' depe or more, and this is the remedy for
 ' the murren. Take a smal curten corde and
 ' bynde it hard about the beastes necke. And
 ' that wyl cause the bloude to come into the
 ' necke and on eyther syde of the necke there
 ' is a wayne, that a man may fele with his
 ' finger, and then take a bloude pyon and set
 ' it streyght vpon the wayne, and smyte him
 ' bloude on both sydes, and let him blede
 ' the mountenaunce of a pynt or nygh it, and
 ' then take away the corde and it wyl staunch
 ' bledinge. And thus serue al thy cattel that
 ' be in that close or pasture and there shal no
 ' mo be sycke, by gods leaue.

Of

Of the Loss of Appetite in Cows and Oxen.

WE may perceive this, when Cattle of this Sort do not chew the Cud, which is occasioned through the Want of Digestion; they then forbear their Meat, and do not lick themselves, as usual; their Eyes are dull, and they have frequent Belchings. To cure this, or restore them to their Appetite, use the following Medicine, *viz.*

TAKE of Rhue and Pellitory of *Spain*, of each one Handful; of Featherfew, Horehound, Red Sage, and Bay-Salt, of each a like Quantity; put these Ingredients into five Pints of Ale-Wort, and boil them for a short Space; and then straining off the Liquor, give about a Pint at a Time, milk-warm, to each Beast every Morning, not suffering them to drink till the Afternoon.

THE Neglecting of this Distemper, will occasion the Beast to be violently pained, which one may perceive by its suddenly starting from one Place to another; which, when we perceive, there is no better Remedy than to tye his Tail close by the Body, as tight as possible, giving him then a Pint of strong pure White-Wine, with Half a Pint of Olive-Oil, driving him afterwards a Mile or two as fast as you can get him along; and after some little resting, drive him yet a Mile farther, which will occasion the Medicine to operate.

THERE

THERE is a merry Conceit among some of the Farmers, when a Cow or Ox is troubled with the foregoing Distemper, which many call the Cholic, that it is cured by bringing them to the Sight of Geese or Ducks; taking their Fancy originally, as I suppose, from *Columella* and *Vegetius*, who have writ the same Thing. My Opinion of this, is only, that the Distemper proceeds chiefly from the Want of Water; and that where the Geese and Ducks, which are Water-Fowl, are found, we may reasonably suppose there can be no Want of that Element; for the foresaid Fowl are seldom met with wild, or in their natural State, but in such Countries as abound in Water. It is not the bare Sight of the Goose or Duck will cure the Distemper, but the Abundance of Water.

IN the Year 1714, the Distemper among the Cows was chiefly attributed to the Want of Water, where they fared the worst; but in such Places where they had Plenty of it, I could not learn that any of them suffered.

A Remedy for a Cow that is Back-strained, or has the Running.

TAKE Comfrey, Archangel, Knott-Grass, Plantain, and Shepherds-Purse, a Handful of each; boil these, tyed up in Bunches, in about five Pints of Ale-Wort; or, for want of that, in middling Beer free from the Yest, till the Liquor is strong
of

of the Herbs ; then add an Ounce of Anniseed, and about a Quarter of a Pound of Bole Armoniac, finely powdered : When these have boiled again, put in about Half a Pound of Treacle, and when it is strained or passed through a Sieve, give Half the Liquor to a Cow in the Morning, and the other Half the Morning following, not suffering her to drink till the Afternoon.

THIS Distemper is not unlike the Running of the Reins in other Creatures.

Of the Pissing of Blood in Cows or Oxen.

THIS Distemper often proves fatal to Cattle, and is cured partly by the Ingredients used in the foregoing Medicine, viz. Plantain, Shepherds-Purse, and Knott-Grass, of each Half an Handful ; to which add, likewise, Half an Handful of Camomil : Shred the Herbs small, and boil them in two Quarts of Ale-Wort, or as much Ale, free from the Yest, for about twenty Minutes ; then add Bole-Armoniac, finely powdered, about two Ounces, and as much Fullers-Earth ; then straining off the Liquor, when these have boiled all together four or five Minutes longer, sweeten it with about four Ounces of Treacle, and it will make a Draught for an Ox, Bull, or Cow, to be given in the Morning. This Dose may be repeated two or three Mornings successively.

IN very desperate Cases of this Nature, we may, instead of the Bole, boil with the Herbs the same Quantity of Oak-Bark finely powdered; and it will have a surprizing Effect.

Of the Distemper called the Tail.

THE Disease called the *Tail* is by some Farmers called the *Wolf*. This is discovered by a Softness between some of the Joints of the Tail, appearing as if the Joints had been separated from one another, or some of the Ligaments broken.

WE ought particularly, where we are apprehensive of this Case, with our Finger and Thumb to feel between every Joint of the Tail, and where we find any Division or Openness between the Bones, or any remarkable Softness between the Joints, to slit that Part with a sharp Knife lengthways, on the under Side of the Tail, about two Inches, laying in the Wound the following Composition.

SEA or Common Salt, Wood-Sutt and Garlick, well beaten and mixed together, of each a like Quantity, binding them up with a Bit of Linnen Cloth.

Of

Of the Blane, or Fore-spring, in a Bullock; and its Cure.

THIS Distemper shews it self by the Cow or Bullock's Feeding in Pain; for it is generally attended with Blisters under the Tongue, which if we find, we must rub the fore Part with Vinegar, and Salt, the Vinegar being some of the sharpest that can be had; and we must alternately wash the Part with a Decoction of the Inner Bark of Elm, and of Oak, in equal Quantities, *viz.* about two Ounces of each, boiled in a Quart of Rain-Water, till it is reduced to a Pint.

WHILE this Method is used, bleed the Beast in the Neck, and give the following Medicine, *viz.*

TAKE of Treacle, six Ounces, and mix it well with a Pint of strong White-Wine, and two large Spoonfuls of Vinegar, after about six Ounces of Butter has been melted and mixed with the Wine and Treacle: Give this, milk-warm, to the Cow or Bullock, walking it gently after the Reception of the Medicine, for about Half an Hour.

Of the Hind-Spring, or Stringe, in a Cow or Bullock.

THIS is a very dangerous Distemper, though it very seldom happens among this Sort of Cattle. It is occasioned by too much dry Meat, or more
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generally when they are obliged to feed upon Oak-Leaves for want of Grafs or other Provender; by which Means they become bound in their Body, and cannot dung.

THE Method of Cure is, to rake the Cow or Bullock with one's Hand, after one has well greased it; and to take away the dried Dung, and Clots of Blood, which will then be found in its Fundament.

ADMINISTER then, to the same Part, to the same Extent that you could reach, as much Bay-Salt as you can introduce with your Hand; which will irritate that Passage so much, that it will occasion the *Beast* to dung freely, and heal the Wounds; especially if we give him, at that Time, the Preparation of Wine, Treacle, and Butter, prescribed in the former Medicine for the Fore-spring.

Of the Middle-spring, or Wind, or Puff, in a Cow or Ox.

THIS Distemper proves fatal if it is not taken in Time, the Cow or Bullock appearing as if the Skin of their Body was blown up as one would do a Bladder; their Breath is then short, and becomes much shorter in standing only a Quarter of an Hour, while their Hide seems to swell as much in Proportion.

To

To remedy this, the Way is, to take a sharp-pointed Penknife, and strike it into the Panel on the Left Side of the Cow or Bullock, about four Inches from the Loyn, and the same Distance from the Short Ribs; you will then easily perceive the Wind press out from the Body of the Beast, and the Creature will immediately be easy.

THEN shave off the Hair about the Wound, and apply to it a Plaister of Shoemakers Wax.

Of the Flux, or Lask, or Scowr, in Cattle.

WHEN a Beast is troubled with this Distemper, we may be sure it will lose its Flesh more in a Day, than it can recover in a Week or ten Days. The Remedy is, to keep them from drinking much, in the first Place.

AND, Secondly, to give them little Meat the first Day, or, as some would have it, keep them fasting for twelve Hours at least. There are several Drinks which we may give them on this Occasion, that have been experienced to be extremely serviceable to them, such as the following: *viz.*

THE Stones of Grapes or Raisins, beaten to Powder, to the Quantity of a Quarter of an Ounce, and boiled in a Quart of strong Ale, may be given warm in a Morning.

FOR Want of this, we may use as much of the Inner Bark of Oak, boiled with strong Ale or Beer Wort, or strong Malt-Drink free from Yest, strained after boiling, and given them about a Quart in a Morning, being first sweetened with an Ounce of coarse Sugar well dried before the Fire. Some choose to boil in this Mixture, a Handful of Wormwood, and an Ounce of Bole-Armoniac.

WE have another Receipt relating to the same Case, which is likewise very successful, *viz.*

TAKE Rhue, Red Sage, and Roman Wormwood, if you can get it, or otherwise, our common Wormwood may serve: Shred of each of these one Handful, and boil them Half an Hour in Ale-Wort, or good Drink free from Yest; then put in four Ounces of Bole-Armoniac, and about an Ounce of the *Grains* powdered, with a Piece of Butter without Salt; let these boil a little, and give half the Quantity to a Cow or Bullock in the Morning, keeping them from Water two or three Hours afterwards; and then missing a Day, give them the other Half.

Of the Cleaning of a Cow; how to help her immediately after calving, and to heal her after the Cleaning is taken away.

WHEN a Cow has calved, give her warm Water, about a common Pail full, with Wheaten-Meal,

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about

about a Pint, and about as much burning Wood Embers thrown into the Water ; which will help the Cow to clean.

If they are Oak-Embers, so much the better ; I mean burning Coals of Oak, not having too much Regard to the Ashes.

If after this the Cow has any Difficulty in Cleaning, give her the following Medicine, which will discharge as well as heal ; taking especial Care that she does not eat the Cleaning when it falls from her.

TAKE of Vervain, Half a Handful ; Motherwort, Rhue, Camomil and Featherfew, of each an Handful : Make a Decoction of these Herbs, in Bunches, with about three Quarts of Ale-Wort, or middling Ale, till the Liquor is strong of the Herbs ; then add an Ounce of Mistletoe finely pulverized or powdered, with Liquorice and Anni-feed, of each an Ounce, beaten and powdered ; and when it is ready to come off from the Fire, put in a Piece of Fresh Butter, and it will make a Dose for your Cow, to be given for two Mornings.

N. B. WHEN you give these Medicines, the Cows should not have any Water for three or four Hours afterwards.

Of the Cough in Cows or Bullocks.

SOME Farmers, when they perceive this among their Cattle, rightly judge, that if not soon removed, it may prove of dangerous Consequence; and therefore in the Beginning give them the following Medicine, *viz.*

A PINT of Barley-Meal, the Yolk of an Egg, and two or three Ounces of Raisins, boiled in a Quart of Ale-Wort, and well mixed together, for them to take in the Morning fasting; always supposing that the grosser Parts must be taken out of the Draught before we give it to the Cow or Ox; as the Raisins in this Case, for Example.

ANOTHER Method which is famous among the Country People, is, to take a large Handful of Hyssop, and boil it in Water, afterwards straining the Water from the Hyssop, and mixing it either with Wheat-Flour, or Barley-Flour, and to give it the Beast to drink. Or else

You may boil Hyssop in Ale-Wort, about the same Quantity; and give it a Cow or an Ox that has the Cough, with good Success.

SOMETIMES these Cattle, when they have the Cough, will be led into a Consumption of the Lungs; to prevent which, fetter them in the Dew-

Lap, and give them two Ounces of the Juice of Leeks, boiled in a Quart of Ale.

IN desperate Cases, boil the Seeds of Fenu-greek, of Annise, and Bay-Berries, of each half an Ounce, and Madder two Ounces, in two Quarts of good Ale, free from the Yest, till the Liquor loses a fourth Part.

It must be noted, that the Madder and Seeds must be well beaten and mixed together, before you put them into the Ale ; and after the Liquor is passed through a Sieve, while it is yet warm, sweeten it with Treacle, and give it in the Morning.

Of the Fever in a Cow or Bullock.

WE may know when a Cow or Bullock has a Fever, by the Watering of their Eyes ; their Heads will be heavy, their Pulsation quick, and their Body much hotter than usual : Moreover, we may observe a viscous Liquid to fall from their Mouths.

THE Morning following, let them blood in the Tail ; and an Hour after give them the following Medicine, *viz.*

TAKE one Handful of the young Stalks of Cole-worts, if they are to be had ; or, for want of these, as much of *Cabbage-Leaves*, or *Savoy-Leaves*,

Leaves, or the Leaves of *Curled Worts* ; boil these in a Quart or three Pints of common Water, with a little Salt ; and after straining it off, add a little Fresh Butter, stirring it till it is entirely dissolved : An Ounce of Treacle may likewise be mixed with this Medicine, and given milk-warm for four or five Mornings successively, while they are fasting.

SOME Farmers and Cow-Leaches boil the Colewort-Stalks in Small Beer, which is judged to be even better than the Water and Salt.

OTHERS boil Barley or Malt in Water, and then boil the Colewort-Stalks, and add Butter and Salt to the Medicine.

Of the Stoppage of Urine, in a Cow or Bullock ; and the Method of Cure.

THIS Distemper is supposed to be the Gravel in the Kidneys, when it first appears.

I HAVE frequently, in examining the Kidneys of Oxen and Cows, met with rough Stones in those Parts, even to the Number of an Hundred in one of them, about the Bigness of a Wheat Corn.

BUT this Gravel, or Stone, let us call it which we will, is sometimes found in the Bladders or Urinary Passages of these Creatures ; and then it is best to kill them at once : For if we observe them

two or three Days without Watering, we may know that it is not in the Kidneys alone.

If the Distemper should happen to be in the Kidneys, as one may perceive by the Cattle's Difficulty of Watering, and groaning at that Time, give them the following Medicine, *viz.*

Boil of Parsley, Smallage, or green Sellery, Saxifrage, Alexanders, and Rhue, of each one Handful, in about two Quarts of old Beer: Strain this off, or pass it through a Sieve, while it is strong of the Herbs; then put in of Liquorice sliced, Anniseed, Cummin-Seed, Coriander-Seed, and Turmerick, of each an Ounce; and boiling them again in the Liquor till it is strong of the last Ingredients, add Fresh Butter and Treacle to it, to the Quantity of a Quarter of a Pound each.

This will serve for two Mornings.

N. B. In this Case some of the most curious will put in about a Quarter of an Ounce of fine Oyfter-Shell Powder, or two or three Drams of Powder of Crabs Eyes.

When the Distemper is so far advanced that the very Yard of the Bullock is supposed to be stopt by Gravel, it is advised by some of the Cow-Leaches, to cut them; but it has been sometimes eased by putting a small Wire up the *Penis*, like a *Catheter*.

The Kibe in a Bullock, and its Cure.

ONE Receipt for the Kibe, which has proved of very good Use, is, first, to cut it with a sharp Knife; and then to apply the following Medicine with fine Tow to the Wound, viz.

TAKE an Ounce of Verdigrease, finely beaten and sifted; work this into a Salve with two Ounces of fine Soap, and dress the Kibe with it.

THERE has been other Medicines prescribed for the Kibe, in this Sort of Cattle; as the Use of *Aqua fortis* instead of Cutting; but it is dangerous, and should by no means be used.

Of Halting in Oxen.

IF we follow the Ancients in this Distemper, which they call the *Halt*, they seem to mean no more than the Kibe. *Vegetius* advises to examine their Hoofs, the Heat of which will declare their Grief: Besides, they will hardly suffer you to touch the Hoof, or any Part thereabouts.

IN the old Times they directed scarifying of the affected Place, and applying to the Wound Cloths dipt in Vinegar and Salt.

ALSO they prescribed, after laying open the distempered Part with a fine Knife, and the Wound

well cleaned, to apply Salt and Oyl of Olives to it, and at length to anoint it with Hogs-Lard, and Mutton Suet, boiled together.

A LEARNED Nobleman, whom I before distinguished by the Name of *Conrade Heresbatch*, tells us, that it is his Opinion that the Country People in his Time, which was near two Hundred Years since, judged that the Distemper which they called the *Fowle* or *Whisp*, was the same with what we have been treating of; and which they cured frequently by drawing a Rope of Straw, or Hair, through the Claws till the affected Part bled, or else by searing it with a hot Iron.

HE imagines, *that this Distemper is occasioned by too great a Quantity of Blood falling into the Legs of the Beast.* He therefore goes on to tell us, that if Blood be in the lower Part of the Hoof, the outermost part of the Claw must be pared to the Quick, the Blood let out; and after the Foot is wrapped with Cloths, and shooed with Broom, the Hoof must be opened in the Middle.

IF he halt by reason of the Cramp, or Pain of the Sinews, you may rub his Knees, Thighs, and Legs, with Salt and Oyl, till he be well.

IF his Knees or Joints be swoln, they must be bathed with warm Vinegar and Linseed Oyl, or Millet, beaten and laid to it, with Water and Honey.

Also

Also Spunges wet in hot Water, and dried again, and anointed with Honey, are very good to be laid to the Knee. If there be any Humour under the Swelling, Leaven or Barley-Meal soaked in Water and Honey, or sweet Wine, may be laid to it; and when it is ripe, it must be opened with a sharp Knife, and healed as before.

ALL Swellings generally, if they are not broken, must be dissolved whilst they are new, with Baths and Fomentations; and if they are old, they must be burned, and the Burning anointed with Butter, or Goat Suet.

IF the Ox chance to hurt his Heel, or his Hoof, Stone-Pitch, Brimstone, and greasy Wool, should be burnt upon the Sore with a hot Iron.

THE like may be done when it is hurt with a *Stubb*, Thorn, or Nail, being first plucked out; but if it be very deep, it must be opened wide with a Knife.

IF he has kided Heels, take and cast him, and bind his Legs fast together; then take your Knife and cut it out as nigh as you can, and let him bleed freely. Then take a Pennyworth of Verdegrease, and the Yolk of an Egg, mix them well together, and bind them close to the Place, and it will heal the Wound.

MANY

MANY of the Prescriptions given as above by the Heer *Heresbatch* have been approved lately with us, and are commonly used among the Cow-Leaches of the best Reputation; only instead of Wine they generally use old Beer, and Butter instead of Oyl, they being had more easily, and at less Expence, then Wine or Oyl, and are very proper Substitutes in their Places.

MR. *Fitzherbert*, who writ about the Year 1500, of Cattle, and their Distempers, gives us the following Paragraph concerning the Distemper above-mentioned.

There be Beastes that wyl have the foule, and that is between the clese, sometyme before and sometyme behynde, and it wyl smel and cause him to halte, and this is the remedy, caste him downe, and bynde his foure feet together, and take a rope of heare, or a rope harde wythen together, and put it betwene his clees, and drawe the rope to and fro a good season tyl he blede wel, and then laye to it sott made terre, (Soot mixed with Tar) and bind a cloth about it that no myze nor grauel come betwene the clees, and put him in a pasture, or to stande styl in the house, and he wyl be shortelye hole.

Of

Of the Yellows in a Cow or Bullock, which some call the Pantefs.

THIS Distemper is called by some the Gallin Cattle, and may be known by the Running of the Eyes, and a large Quantity of yellow Wax in their Ears; as also, by a Yellowness appearing under the upper Lip.

THIS Distemper commonly proceeds from the Cattle's eating some unwholsome Food, or from poor Diet. The Remedy for it is as follows, *viz.*

TAKE of Wood-Soot, finely powdered, an Ounce; Plantain and Rhue, of each an Handful; Garlick, eight large Cloves, stamped; Hempseed, an Ounce, or the Tops of Hemp, an Handful: Boil these in three Pints of fresh human Urine, or as much old Beer; and when it has passed through a Sieve, give about a Quart of the Liquor to a large Bullock; then rub his Tongue and the Roof of his Mouth with Salt, and chafe his Back with human Urine.

It would be necessary for a Person who chiefly employs his Time in curing Distempers among Cattle, to provide himself with the several Sorts of Herbs that he shall want, in the Summer Season, gathering them when they are clear of the Dew or Wet, and tye them up in Bundles to dry thoroughly,

ly, in such Places where they cannot immediately receive the Sun.

SOME again choose to buy the dryed Plants, and beating them to Powder, keep them separately in Viols well stopp'd.

When a Beast is disordered in his Lungs, the Remedy.

WE may perceive this Distemper in a Beast by the great Weakness in his Legs, so that he will hardly be able to stand, although he may seem fit and in good Order for the Butcher at the same time. The following Medicine in this Case may be used, viz.

BRUISE eight Cloves of Garlick, and take one Handful of Wormwood, with as much Liverwort; boil these gently in a Quart of Ale, free from the Yest, and passing the Liquor through a Sieve, add an Ounce of Madder finely powdered, half a Dram of whole Pepper, and about a dozen Cloves; which as soon as they have boiled enough to give the Liquor a Pungency sufficient, clear them off, and sweeten it with two Ounces of Treacle, giving it the Cow or Ox milk warm.

Another Medicine for the Yellows.

BLEED the Bullock, if it is a proper Season.

TAKE

TAKE Rhue, Angelica, Featherfew, and Celandine, a Handful of each; or for want of Celandine, use the Leaves of Artichokes: Cut these Herbs small, and boil them in five Pints, or three Quarts of old Beer, till it is strong of the Herbs; then add Liquorice sliced, an Ounce; Coriander-Seed, and Cummin-Seed, of each the same Quantity, with two Drams of Long-Pepper, boiling all together gently for three or four Minutes.

SOME would add a Handful of the smaller Centaury, to the Herbs; but where the Leaves of Artichokes are used, that need not be. However, when we take it from the Fire, we may put to it about an Ounce of Flower of Sulphur, with some Butter and Treacle, of the two last about three Ounces each. Half this Preparation may be given to a Cow or Bullock fasting in a Morning, and then resting a Day, give them the rest.

ANOTHER Remedy for this Distemper is the following, *viz.*

TAKE of Rhue, and the lesser Centaury, of each one Handful; two Ounces of Elder Flowers, or, in lieu of these, a good Handful of Elder Buds, or green Stalks of Elder; cut these small, and boil them in five Pints of Ale-wort: When the Liquor is strong of the Herbs, pass it through a Sieve, and put in an Ounce of Anniseed, half a Dram of Saffron, and about an Ounce of Grains;
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let these boil a little, and add of Treacle and Butter about three Ounces each, which will be enough to be given in two Mornings.

Of the Hide-bound; or, The Distemper called the Gargut, in Kine, from Mr. Shuttleworth, of Essex.

THIS Distemper shews it self commonly between the Claws, in Cows or Oxen, by blistering there.

ONE Part of the Cure I have already mentioned must be done by drawing a hair Line between the Claws, or Hoofs, in the blistered Part, till it bleeds.

WE must then take an Handful of the Leaves of the Plant called *Tapsus Barbatus*, in *Latin*, or, in *English*, *Moth-Mullein*; boil this in a Quart of Milk, and give it the Cow in a Morning fasting; or else boil it in Ale, or Ale-wort rather, because there ought to be no Yest.

THIS Mr. *Shuttleworth* uses, upon this Occasion, with great Success, and has not only saved the Lives of many of his own Cows by it, but has been kind enough to communicate it to his Neighbours, who have found as good Effects from it.

THE *Tapsus Barbatus* which I have mentioned above, grows generally wild, upon the Sides of Banks or dry Ditches; it has large Leaves, near the

the Root, in their Shape somewhat like those of *Tobacco*, of a white Colour, and with a Roughness as if they were made of Woollen Cloth.

FROM the Midst of these Leaves, in *May*, *June*, or *July*, according as the Plants happen to be exposed, will rise a Stalk of some Substance, which generally will attain to the Height of two Foot, sometimes three or more, set on all Sides with yellow Flowers.

I AM the more particular in describing the Plant, as this Receipt has been proved to be excellent in its Kind.

THERE is no Distemper so much misunderstood as that which they call the *Gargut*; for in every County, and in almost every Hundred of a County, the Distemper is differently judged of: But what is meant under this Head is such, that if we handle the Skin of the Beast, it will be tight, and stick close to his Body, which proceeds chiefly from its feeding too much upon Clover, Lucern, Saint-foyne, or other such rich Grasses, which swell the Body, and will occasion them sometimes to burst.

ANOTHER Mark of this Distemper among the Farmers, is a Lowring of the Beast; but that a Beast is subject to in most Distempers of the Guts. Bleeding is necessary as soon as we perceive they are thus attacked. But the chief Mark is the Strait-

Straitness of the Skin, and the too great Swelling of their Belly.

N. B. A Cow or Bullock may take this Dose two Mornings, keeping them warm in some House while the Medicine works.

Of the Gargyse.

THE Distemper called the Gargyse, is a Swelling on one Side of the Eye, in manner of a Boil, Botch or Buboe. This is as dangerous a Distemper as any that can attend Cattle. Cut with a sharp Penknife, or Lancet, this Swelling round about, as deep as the Skin, to prevent its falling into the Muzzle of the Beast, which will certainly happen, if not timely prevented by this Method, and prove Mortal.

WHEN we have opened the Skin, as above directed, wash the Wound with the following Preparation, *viz.*

FRESH human Urine and Salt, must be gently simmered over a Fire together, and when it is near cold, wash the Swelling, and the Part that has been cut, with it, Mornings and Evenings, till the Swelling abates; at the same time giving the Beast every other Morning some Flower of Sulphur, in warm Ale, or Ale-wort.

WHEN

WHEN you dress this Botch, or Boil, have particular regard to scrape off, or clean the Boil and the wounded Part from the little Blisters, or Pustules, even till you come to the *Quick*, and the Sore has quite ceased Running.

WHEN the Swelling is quite gone, anoint the Wound; and sore Part, with Nerve-Oyl and Honey, boiled together, while the Preparation is Milk-warm, and it will soon heal.

A General Remedy for Cattle that Lowr, or lose the Cud.

TAKE an Handful of inward Rind of Elder, an Handful of Rhue, and as much Lungwort, if it can easily be had, otherwise it may be let alone; chop them small, and put them into three Quarts of Ale free from the Yest, or in as much Ale Wort; boil these till they are soft, then stir them; then add Half an Ounce of Long Pepper, Half an Ounce of Grains, Half an Ounce of Liquorice, Half an Ounce of Anniseeds, a Quarter of an Ounce of Cummin Seed, an Ounce of Turmerick, and as much Fenugreek Seeds, all well beaten, with a Quarter of a Pound of Madder; and while all these are boiling take a large Bowl-Dish, and put into it an Handful of Bay-Salt, twelve Cloves of Garlick, four new laid Eggs Shells and all; grind all these together with a wooden Pestle, till they are well mixed with some of the Liquor; then add

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the whole Body of the Decoction as hot as may be, letting the whole stand together till it is no warmer than Milk from the Cow, *brewing* it well together: Give the Beast half the Quantity to drink, while it is yet warm, two Mornings successively, keeping the Ox or Cow warm that takes it, for four or five Hours after before you give them any Water.

Another General Remedy for Cattle.

TAKE Half an Ounce of Grains, an Ounce of Anniseeds, and as much Cummin-Seeds; and of Bay-Berries, Fenugreek-Seeds, and Turmerick, of each Half an Ounce; three Ounces of Madder, and as much Treacle as will make the Composition indifferently sweet.

WHEN these are ground and well mixed together, put them into three Quarts of Ale free from Yest, or new Wort; let them boil together till the Drink is strong of the abovementioned Ingredients, and when it has stood from the Fire till it is only Milk-warm, give Half of it to the Beast in the Morning, before he has taken any Water, and suffer him not to drink till after Noon, if it be in the Summer time, nor till Night, if it be in the Winter.

A Cow-Spice, or Powder, proper for Cattle that lose their Cud, or Languish.

THE following Medicine is of soveraign Use either to the Cow or Ox, and may be always ready in the House, but must be carefully kept from the Air till we want to use it. The best Way for preserving it is to keep it in large open mouthed Bottles, with glasse Stopples, in a dry Place.

ABOUT three large Spoonfuls of this may be used at one time, in about a Quart, or three Pints of Ale Wort made warm, or as much Ale free from Yest.

TAKE of Anniseed, Cummin-Seed, Liquorice, and Turmerick, of each two Ounces; Coriander-Seeds, and Grains, of each Half an Ounce: Beat and grind these small, and mixing them well together, the Composition will be fit for Use at any time. To this may likewise be added two Ounces of Madder finely ground, and when ye use it you may add a little Butter and Treacle, and give it warm in a Morning, not suffering the Beast to drink till five or six Hours after taking the Medicine.

ONE may make, though I prescribe this only in small Quantity, enough at once to serve many Cattle: For it will keep a Year or two very well, if we use the Method above directed, observing that the Proportions are the same; a Pound, for

Example, to an Ounce ; Half a Pound to Half an Ounce, &c.

For a Cow or Bullock that is Clue-bound.

TAKE Castile Soap, or what some call Castle-Soap, Half a Pound ; to this add Treacle and Butter, of each a like Quantity : Put these into three Pints of soft Water, wherein Chalk has been infused, though some would recommend *Stand-Lee* ; of either of these Liquors take three Quarts, and when the whole is dissolved, and mixed, give half the Medicine to your Cow or Bullock in a Morning before they have drunk, keeping them in an House till Noon. Repeat this Medicine two Mornings.

IF yet the Beast should be too much bound in his Body, or the Medicine should not happen to operate, give him some Balls made of Butter and Riff-Sand.

For Oxen that are Galled, or bruised in the Neck, by the Yoke.

TAKE Train Oyl, and grind it well with White Lead, till it becomes a Salve ; with this anoint the grieved Part, and it will presently heal the Sore, and discharge the Swelling.

ANOTHER Remedy for Bruises, or Galls of this Kind, is the *Pitch-Oyl*, made by Mr. John Pingo,
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my curious Friend, in *New-Street* near *Shoe-Lane*, from the *British Pitch*, which he formerly extracted from Minerals at *Broseley* in *Shropshire*. Many great Cures have been done by this Oyl, which makes me wonder the more that those Pitch Works have been discontinued for some Time. But if I may be a Judge of the Reason why we have lost so valuable a Thing as the *British Pitch*, and that the Mines are not now employed, I guess it is from the Establishing, or setting them up at first in a Body, or Company, or dividing it into Shares, which fulfills a good Proverb, *That every Body's Business is no Body's Business*.

I SHALL desire my Reader's Patience, if, while I have this Opportunity, I remark, That the Ships to which this *Broseley Pitch* was used, were not subject to the Worm, although they had made Voyages to those Seas where they are most infested by those pernicious Creatures; and the Oyl of this does not only discharge a Swelling, or coagulate the Blood, or bruised Part of an Animal, but prevents any wounded Part from receiving Injury by Insects; as well as making the Hair to grow thick where it was not before.

Of the Scab in Cows or Oxen.

THIS Distemper chiefly comes from Poorness of Diet, and is very infectious among Cattle, spreading it self presently through a whole Herd. It is

sometimes occasioned by the want of Water in Summer time.

THE best way of Curing this, is to make a strong Decoction of *Tobacco* Stalks in human Urine, and to wash the infected Parts frequently with it; at the same time giving the Beast the following Drink.

TAKE of Rhue, Angelica, of each a Handful: Shred these Herbs small, and boil them in three Quarts of Ale without Yest, or new Wort; and add an Ounce or two of Flower of Sulphur, with Butter and Treacle, of each three Ounces, giving it to the Bullock at two Mornings.

WHEN this Distemper happens to any Bullock, it will soon reduce him to a Leanness and Poverty of Flesh; wherefore bleed him, and you may give him the following Medicine, *viz.*

OF old human Urine a Quart, in which mix an Handful of Hen's Dung, or Half an Handful of Pidgeon's Dung, and give it to the Beast to drink.

BUT what I think the best of all is, such a Water as is chalibiate, and well impregnated with Sulphur, such as I have observed in the Gardens of *Charles Du Bois*, Esq; at *Mitcham* in *Surrey*, which indeed is very foetid, but is of great Efficacy to be drunk in all scrophulous Cases; and, as the worthy Gentleman, in whose Garden it is, has told me, will immediately cure Dogs of the Mange.

Of

Of the Husk in a Bullock, &c.

TAKE Hyssop, the Smaller Centaury, Celandine, Marsh-Mallows, of each one Handful: Boil these in Ale free from the Yest, or in three Quarts of Ale Wort; then add about three Ounces of Cow-Spice, made as above directed, with Treacle and Butter, of each six Ounces. This will make two Doses, to be given every other Morning.

A Drink for a Bullock that has the Bloody Scowr, or the Bloody Flux.

TAKE of Elder Buds, or Elder Flowers, an Handful; if the Elder Flowers are dry take two Ounces of them; Hyssop, Mallows, and Celandine, an Handful of each.

IF the Cow or Bullock be large, boil these in five Pints of old Strong Beer; or if it be but of a small Breed, boil these in three Pints, to which add Anniseeds and Liquorice, of each about two Ounces, more or less if the Bullock is larger or smaller, with Treacle and Butter, of each six Ounces; put to them Madder Powder about two Ounces.

WHEN you give your Beast this Drink keep him warm, and give him warm Mashies, in each of which about a Quarter of an Ounce of Oak-Bark has been grated.

WHILE this Distemper is upon him do not suffer him by any Means to drink cold Water, but prevent his Thirst by Mashies only.

Of Imposthumes.

WHEN any Botch or Boil appears upon a Bullock, take White Lilly Roots, and boil them in a Quart or three Pints of Milk till they are soft; then beat them with the Milk till they become a Pulp, and lay them on hot to the grieved Place, which will occasion it to become softer by degrees, till it will be fit to open; which some do with an hot Iron, and others with a fine Pen-knife, washing well the Part afterward with Brandy and Water.

To heal a Wound of this Kind it is a common Practice to use Tar, Turpentine, and Oyl, mixed together.

For a Sinew Strain.

WHEN a Beast is strained in his Sinews, or it appears that the Sinews are weak, take Marsh-Mallows, and Chick-Weed, of each an Handful; boil them in a Quart of Vinegar, adding three or four Ounces of Tallow; or for want of Vinegar use the Dregs of Stale Beer.

WITH this Mixture, while it is very hot, bathe the grieved Part.

For

For an Inflammation in the Lungs of a Bullock.

A Cow or Bullock troubled with this Distemper will discover it by holding its Head higher than common, and drawing its Wind with difficulty ; it will likewise be chiefly in a standing Posture, without caring to lie down, and will groan very much.

THE Cure is to bleed it in the Neck, and then give it the following Dose, *viz.*

TAKE Lung-wort, Celandine, and Hyssop, of each an Handful ; of the Smaller Centaury dried, Half an Handful ; Elder Flowers dried, an Ounce ; or for want of them, four Ounces of Elder Tops : Boil these well together in a Quart of Ale Wort, or in lieu of that in a Quart of Ale free from Yest : Then press the Herbs, and strain the Liquor from them, putting at the same time to it an Ounce and Half of the Cow Spice abovementioned, or for want of that, Anniseeds and Fenugreek Seeds, of each an Ounce ; with about an Ounce and Half of Liquorice sliced ; boil these together for a little While, and add of Butter and Treacle, six Ounces each, which will make a Medicine to be given two successive Mornings.

THE Setting of a Bullock (in this Distemper) in the Dew-Lap with Hellebore has proved effectual.

The

The best Remedy for a Fresh or Green Wound in a Cow or Bullock.

IF a Cow or Bullock happens to be flaked, cut, or otherwise wounded; or else should be troubled with a severe Flux of Blood; I find nothing more prevailing, in either Case, than the Application of a Stiptick Liquor, chymically prepared by Mr. *John Pingo*, in *New-Street, Shoe-Lane, London*; and it is not only certain in the Cure of the Wounds in large Cattle, but in Poultry also.

IT is not long since he had a Nail drove through the Brains of a Cock, and by his immediate Application of the Stiptick of his Composing, the Cock recovered: And a few Years ago I used the same Remedy to an Horse that was cut in the Sinews, which immediately relieved him, and healed the Wound, notwithstanding there was so great an Effusion of Blood, that he was looked upon as irrecoverable. This, considering the small Price he affords it at, ought to be in the Hands of every Cow or Horse keeper; especially, since Accidents of this Nature will seldom wait for a Cow Leach to be sent for time enough to do any Good.

THIS Stiptick will prove also of great Use to be given inwardly, about two Spoonfuls at a time in old Beer, when Cattle happen to be troubled with a Flux of Blood.

*An Unguent for a Cow or Bullock that has any Sore,
or Wound about it.*

TAKE *Hogs-Lard* finely rendered, six Ounces ;
Honey, an Ounce and Half ; Bees-Wax, and
Rosin, of each Half an Ounce ; stir these over a
gentle Fire together till they melt.

It is adviseable when we prepare this Unguent,
to make it abroad in some open Place, least it
take Fire and do Mischief : For a Fire of this
Nature is not easily stopped by unskilful Hands.
The Method is, to put a Cover directly upon the
Pan, or other Vessel, wherein we melt the above
Ingredients, as soon as they happen to flame, and
the Fire will be immediately extinguished.

BUT to return to the Receipt, When the above
Composition is melted, add thereto about six or
seven Ounces of Turpentine ; and when that is
well mixed, take it from the Fire, and stir in about
six Drams of Verdigrease finely pulverised, till the
Salve is almost cold.

THE Sore, which by Neglect may sometimes
happen to reach deep in the Flesh, must be first
carefully examined, and well washed with human
Urine ; or if ye cannot come to the Bottom of it
it must be cut ; but it is better to avoid that Ope-
ration, which is seldom without great Danger.

BUT

BUT we shall suppose, that by means of a Syringe, and the human Urine above directed, an old Sore may be cleansed of its putrid Matter, so that the Salve above prescribed may take Place.

IT is certain, that this Verdigrease Ointment, where it can be applied, performs its Cure, and is excellent to be used in the Festering of *Spir-Galls*; besides, it is no less Observable, that where this Unguent is used, no Flies or Insects will come.

VERDIGREASE is somewhat difficult to pulverise, or reduce to that fine Powder which one could wish; but it may be softened or dissolved in the following manner, *viz.*

TAKE Verdigrease, one Ounce, in the Lump; put it in a Vessel with sharp Vinegar, about Half a Pint; to which add about Half a Dram of white Argol, finely powdered: As soon as the Verdigrease and Vinegar begin to boil, stir the boiling Composition till the Verdigrease is dissolved: Then separate the Verdigrease as soon as it is settled from the Vinegar, and wash it well in common Water, letting it stand till the Verdigrease is again settled at the Bottom of the Water; at which time pour off the Water, and dry the Verdigrease over a gentle Fire, which will occasion it to discharge the Argol; then pulverise it, and pass it through a fine Sieve, and use it as above directed.

An Ointment for a Bullock, or Cow, that has a Swelling attending any Wound.

TAKE of Hogs-Lard, Lintseed-Oyl, and Red-Lead, of each three Ounces.

MELT the Oyl and Hog's Seam together, then add the Red-Lead, and stir it well off the Fire till the Composition is cold.

THIS Salve being warmed, and dissolved with an hot Iron, may be rubbed upon the swoln Part once a Day, and it will certainly take the Swelling down.

A Water for an Old Wound, or Sore, in a Bullock, or Cow.

TAKE of White Copperas, three Ounces; Roch-Allum, one Ounce and Half; Bole Armoniac, six or seven Ounces: Let these be finely pulverised and mixed together, putting them then in a glazed earthen Vessel over the Fire, and stir them for about fifteen or eighteen Minutes, till they seem to be well incorporated.

TAKE off then the Mixture, and let it cool; after which beat the Composition in a Marble Mortar, till it is reduced to a fine Powder.

You

You must then boil three Quarts of Spring Water, which should rather be that arising from a Spring of Chalk than any other; and closely cover it while it is boiling.

AFTER the Water has boiled for five Minutes, pour it hot into a clean Vessel, and mix with it about three Ounces of the Powder, stirring it well as soon as the Powder is put in.

IN two or three Days this Water will be well settled, and then filter it, and preserve the clear Liquor in a Bottle well stopped.

WHEN you have Occasion to use this Water, make it as hot as it can be endured upon the affected Place, dipping a Linnen Rag into it, and applying that to the Wound; which may be repeated at least twice, if not three times the first Day, and afterwards bind on upon the Sore a piece of Linnen Cloth well soaked in the said Water.

IF the Wound happens to be deep, even though there may be a Fistula, force in some of this Water warm, as before directed, with a Syringe, and it will even cure that Distemper.

An Ointment for a Green Wound in a Bullock or Cow.

THE Ointment of Tobacco is of excellent Use on this Occasion, and is even good if any of the
Sinews

Sinews are hurt : Therefore a Farmer who keeps a great Number of Cattle should not be without it, no more than Oyl of Turpentine.

BEES-WAX, Rosin, Fresh Butter or Hogs-Lard, with Turpentine also, make an excellent Plaister for fresh Wounds in Cattle ; and it is remarkable, that upon the Application of this Ointment no Flies or Insects can come near the Wound.

Of the Haw, or other Diseases in the Eyes of Cattle, which occasion Weeping or Inflammation ; or for the Pin or Web.

WHEN you perceive the Eyes of Cattle to be sore, and flowing with Water, take of White Copperas the Quantity of Half a Dram, in the Lump, and infuse it with Spring Water about Half a Wine Pint ; wash the Eyes of the Beast with the Water twice or thrice a Day.

BUT if the Eyes are much inflamed, wash them with *Eye - Bright* Water, mixed with an equal Quantity of the Juice of House-Leek.

OR on the same Occasion, where there is Danger of a Pin or Web, or when a Beast has received any Cut or Stroke cross the Eyes, use the following Powder, *viz.*

TAKE a new-laid Egg, and having taken out half the White, fill it up with Salt, and a little fine Flower

Flower of Ginger : Wrap this in a wet Cloth, and roast it hard in some warm Cinders, or Embers ; then beat it to Powder, Shell and all, and when it is finely pulverised keep it closely stopped in a Bottle for use.

WHEN you use this Powder, blow a little of it through a Quill into the Eye of the Beast, especially on that Part which seems the most inflamed.

For the Bite of a Mad Dog, Viper, or Slow Worm.

ALTHOUGH the Bite of a Mad Dog, or a Viper, or a Slow Worm, is not immediately painful to a Beast, yet it carries dismal Consequences with it ; for a Bite of that Sort produces an *Hydrophobia*, or somewhat like it, as well in Cattle as it does in Mankind.

It will be happy for a Farmer to know immediately when such an Accident has happened : For unless the Remedy is immediately applied the Beast will be lost ; and if you should happen to kill him for the Markets, the Flesh would be Poisonous, and would convey the Distemper in some Degree to the Eaters of it.

The Remedy which I shall prescribe may not perhaps come time enough to save the Beast, nor is there any way to save the Flesh from being altogether pernicious, if we have not the Remedy ready by us, but the cutting off the Limb as soon

as it has been bitten. However, as most Farmers and Herdsmen smoke Tobacco, they are seldom without Pocket Tinder-Boxes, which may help in this Case.

WASH first the grieved Part with fresh human Urine, and when the Wound is rubbed dry light some Tinder, and lay it burning upon the Parts where the Teeth have penetrated, having first thrown the Bullock.

AND if this does not blister the Part of it self, you may an Hour afterwards touch the same Part with a red hot Iron, till you make a Sore of the Place; you may then use the following Oyl.

TAKE a Pint of Oyl-Olive, and infuse in that about four or five Handfuls of Plantain Leaves, shred small, for eight or nine Days; then boil these together till the Herb grows crisp, and strain it into a glazed earthen Vessel, and anoint the Part with it frequently till the Wound or Sore is healed. This is an Oyl generally used by the Viper-Catchers.

SOME make the following Plaister, of Bole-Armoniac, *Sanguis Draconis*, Barley-Meal, with the Leaves of Plantain shred small, or beaten together in a Marble Mortar, and then beat up with Whites of Eggs. This serves as a Plaister to be laid on fresh and fresh, every Morning and Evening.

Of the Fowle, which is the same as the Swelling in the Hoofs of the Beast.

A FRIEND of mine prescribes, to take a Handful of Mug-wort and bruise it in a Mortar; and having *expressed* the Juice, boil it in clean Tallow, and make an Unguent of it to be applied to the grieved Part.

BUT a former Prescription of breaking the Swelling with a Hair Rope is more customary, and has a very good Effect, taking care to heal the Wound with Tarr, Turpentine, and Grease, mixed together.

Of the Falling down of the Palate.

WHEN a Beast labours hard and wants Water, he is commonly attacked with the Falling down of the Palate; he will yet however endeavour to eat but to little purpose.

To remedy this the Beast must be cast, and you may then thrust up the Palate with your Hand; and as soon as that is done bleed him in the same Place, and anoint the wounded Part with Honey and Salt well mixed together, turning him then to Grass, for dry Meat is by no means proper for him.

A Re-

A Remedy for Bruises in Cattle.

TAKE Brook-Lime, two Handfuls; chop it small, and boil it in Tallow, or in Hog's Lard, for fifteen Minutes, and apply it warm to the affected Place.

A Mixture for a Lameness in a Cow, or Bullock; or when they are Shoulder-pitched, or Cup-sprung.

TAKE Oyl of Turpentine, two Ounces; Oyl of Peter, and Oyl of Spike, of each the like Quantity; mix these with six Ounces of Linseed Oyl, and anoint the grieved Place once every Day till it is well. Or take

NERVE-Oyl, and Linseed-Oyl, of each a like Quantity; mix them well together, and anoint the injured Part once a Day, keeping the Mixture warm whilst you use it.

A Drink for Cows, or Bullocks, that are Shrew-Bitten, or bitten by Mad Dogs, or Vipers.

TAKE of Rhue, the Smaller Centaury, Box, and St. John's Wort, of each one Handful; boil these in six Quarts of Ale Wort till the Liquor is strong of the Herbs; then strain it off, and add a Quart of Water to it; then add five Ounces of the Flower of Sulphur, and of the Cow-Spice (before-mentioned by itself under a particular

Head) three large Spoonfuls, with one Spoonful of Oyfter-shell Powder.

THIS will serve for fix Doses.

SOME would recommend the Setting of the Beast in the Dew-Lap with Black Hellebore. But I have already mentioned the Necessity of burning the bitten Part, as soon as we discover it, especially if it is quickly after the Bite is given.

SOME cure the Bitings of Mad-Dogs, Vipers, and such like venomous Creatures, by stamping Garlick, and laying it upon the Wound; and also say, that Garlick bruised and boiled in the above-mentioned Drink is of great Use.

A Salve, or Charge, for a Wound by a Stub, or Thorn, where some Parts of them are supposed to lodge in the Wound.

ON these Occasions, take black Snails from Commons, or as some call them, black Slugs, with as much black Soap; beat these together till they are well mixed, and make a Salve, which apply to the Wound.

For a Beast that has a Bone broken, or misplaced.

WHEN the Bone is set right, or put in its true Place, use the following Preparation, viz.

BURGUNDY

BURGUNDY Pitch, and Tallow, of each a like Quantity ; put to them as much Linseed Oyl, as when they are well mixed will make a Salve, or Charge, to be plaistered over the afflicted Part.

WHEN this is laid on, splent it, and cover it with a woollen Cloth, and keep it on twenty Days, in which Time the Bone will be well knit.

A Purge for a Cow, or Bullock.

TAKE Butter, Tar, and Honey, with a little Castle Soap ; mix these well together, and give the Mixture in Balls as big as Pidgeons Eggs ; two Balls in a Morning.

Of the Breeding of Milk in Cows, and the Way to promote it.

DRAW a Whey with Strong Beer and Milk, in which boil Anniseed, and Coriander-Seed, finely beaten to Powder, with an Ounce of Sugar Candy well pulverised : Give a Quart of this Medicine to a Cow every Morning, which will not only make her Milk spring freely, but will greatly increase it.

Of the Rot in Oxen or Cows.

WHEN this Distemper attacks any Beast it will fall from its Meat, quickly grow lean, and have a continual Scowring.

To remedy this Distemper, take Bay-Berries finely pulverised, Myrrh, Ivey-Leaves, Featherfew, and the Leaves of Elder ; put these into fresh human Urine, with a Lump of yellow Clay, and a little Bay-Salt ; mix them well together, and give a Pint each Morning warm to the Beast.

THIS Medicine is likewise good for any Beast that is troubled with the Scowring.

A Remedy for swoln Cods in a Bull.

TAKE two Quarts of strong old Beer, in which put an Handful of the young Shoots of Elder, with two Handfuls of the Bark taken from the woody Part of the common Black-Berry Bush ; boil these gently till half the Liquor is consumed, then strain it off and keep it for Use.

WHEN you use this, bathe the Parts Morning and Evening with the Liquor made pretty hot, and bind up the grieved Part afterwards in a double Linnen Cloth that has been dipt in the Liquor.

SOME when they use this Bath, think it proper to add a little Oyl of Roses ; and if Elder Buds, or Tops, are not easy to be had, Oyl of Elder may be used instead of them.

THE Linnen which I prescribe to be used on this Occasion should be made in the Manner of
a Purse,

a Purse, and so drawn easily over the Cod of the Beast.

WHEN the Swelling is pretty well abated, use a Charge of Brandy and Soap, applying it very hot, which will finish the Cure, unless the Cods happen to be much torn or wounded; and if that should be, it is adviseable to geld the Bull.

Conclusion of the Distempers relating to Cows and Bullocks.

As I have given the most approved Receipts for the Cure of the several Distempers incident to Cows and Bullocks, it will be necessary, by Way of Conclusion, to remark, that in all Distempers which require inward Application, the Beast should be kept warm for six or seven Hours after any Medicine is given; and the greatest Care should be taken when you lay on any Charge, that the Beast does not rub itself against that Part.

IF the Canker happens to come upon the Tongue of a Cow or Bullock, it will soon eat it asunder, if not timely prevented; which may be done by washing the Part three or four times a day with the following Water, *viz.*

TAKE of the inward Bark of Elm one Handful, boil it in a Quart of Rain Water till it comes to a Pint; put to this, when it is strained off, half a Dram of White Copperas, finely pulverised; and

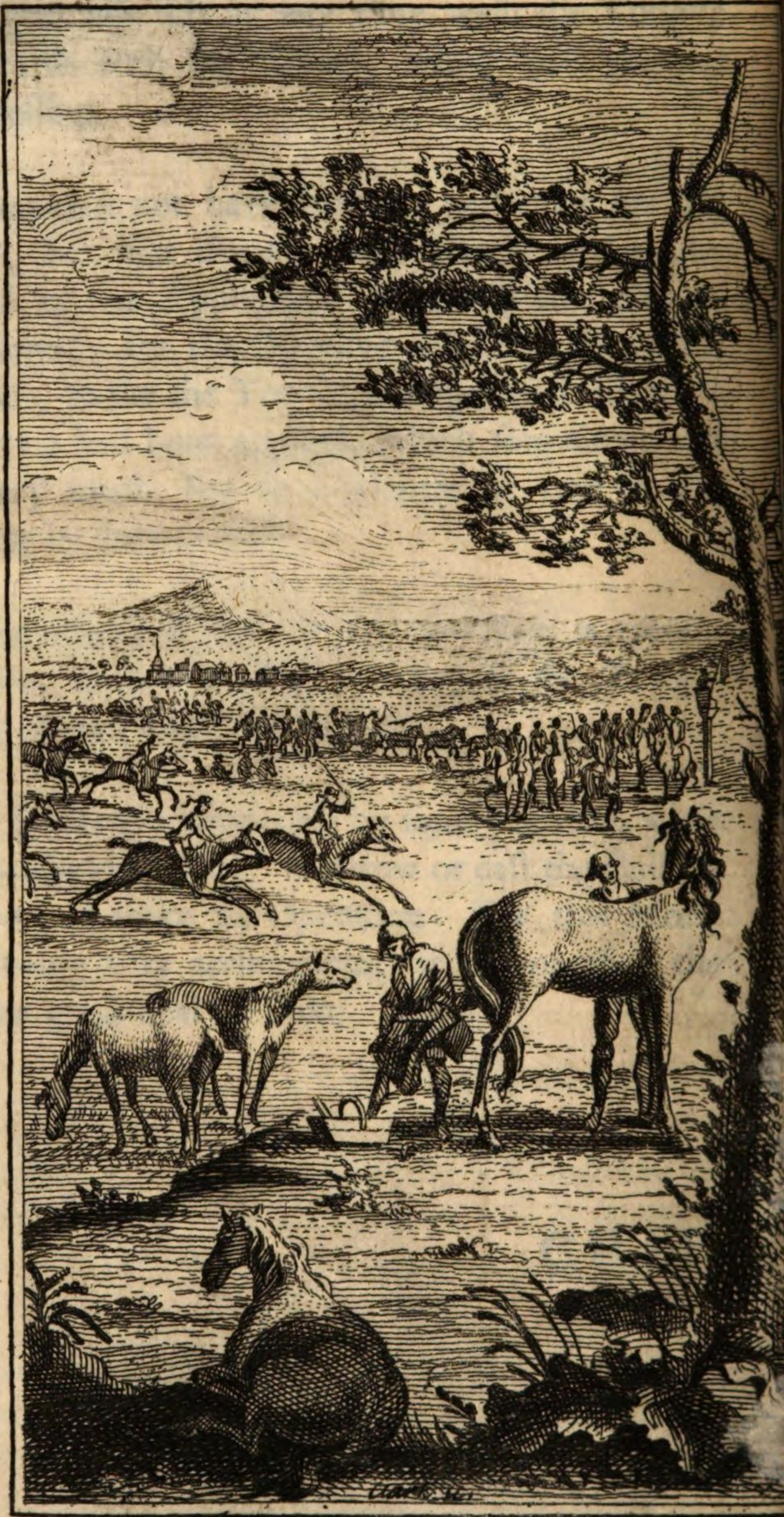
when you use this at any time wash the Tongue afterwards with fair Water, which will prevent its Swelling.

I SHOULD not have been so particular on this Head, but that there is some Nicety to be observed in the Application of the Water above-mentioned; for the Operator might be surpris'd, perhaps, to see the Tongue enlarge itself after the Medicine had been applied, which sometimes will be very much, but in a Minute or two it will recover its former State.

THE Wash of fair Water therefore is recommended, to prevent that Swelling of the Tongue which might otherwise happen.

IT is thought adviseable by some Farmers, when this Medicine is used, to throw or cast the Bullock before you make the Operation: For this Medicine being very acrimonious, it will occasion the Beast a great deal of Pain.

CHAP.





C H A P. IV.

Of Horses.

I DESIGN, in this Chapter, to treat of the Breeding and Training of Horses; and to mention the various Kinds of those Creatures, and of the Exercises which we may happen to employ them in: I shall also mention some Things relating to their Extraordinary Diet, and prescribe the Cure of such Distempers as the Horse is subject to.

Of the True-bred English Horse.

THE True-bred *English* Horse has been accounted a Creature of great Strength and Spirit, and some Authors have made him of a large Size: But at present we have hardly such a Thing as the Horse which one can call truly *English*, or that can be said to be the pure Offspring of an Horse and Mare that were both lineally descended from the original Race of this Country; unless we may account the Horses to be such, that are bred wild, in some of our Forrests, and among the Mountains.

AMONG them, perhaps, the Mares and Horses were both of the first *English* Race, without Mixture: However, it is not certain but some Horses
of

of Foreign Countries, of which many have been, and are now brought over daily, were turned into those wild Places, as convenient Pastures, and have mixed with the Natives of *Britain*. However, as we cannot seek for the *English* Horses any where else, than in such Forrests and wild Places, we will suppose these to be the true *English* Race of Horses.

THESE we find to answer the Character so far as it relates to Strength, and good Spirit; but they are not large, though very hardy; and they will always keep good Flesh on their Backs, and thrive where no other Horses can live.

THIS Race might perhaps have been much larger in former Times than they are now, because in the first Times they were at Liberty to range any where, and take their Pasture where it pleased them best; for then all Grounds lay open, or there were very few Inclosures in comparifon of those we have now a-days: And when they had that plentiful Share of Food, it is natural to judge their Bodies were much larger than they are at present; for it is a certain Rule, that the less Share of Nourishment any Creature has, during the Time of its Growth, so much the smaller will it be in Stature.

BUT of this wild Sort very few are now in Use, in comparifon to what there were an Hundred and Fifty Years ago; and those that are now taken up are not easily tamed: But when they are once disciplined

disciplined they will endure more Labour than any Horses in the known Parts of the World.

Of the Irish Hobbies.

THE *Irish* Hobbies are also of a wild Breed, and generally well made, much after the Manner of the *English* wild Horses. They have fine Heads, strong Necks, and well turned Bodies, quick Eyes, good Limbs, and good Qualities besides enough to recommend them; are of a lively brisk Courage, and very sure footed. But both these are subject to start, which I suppose proceeds from their wild Way of Life, where they have had no Opportunity of seeing or knowing any Thing but Trees and Bushes; every Thing else at first seems strange and shocking to them.

BUT if they happen to be Young when we take them from the Forrests, or other wild Pastures, this may perhaps be overcome; but if they are not so, then I judge it is impossible ever to break them of it; for as they have never known any Thing but wild Scenes, and have been a long time habituated to them; so every Thing which differs from them will seem strange, if not monstrous, and will strike them with Fear and Horror never to be corrected.

IN *Ireland*, as I am informed, these Horses are so wild, that the only Way of taking them is by assembling a great Number of People together,
and

and driving the whole Studd, both Horses, Mares, Colts, and Fillies, into a Bogg, where they take and halter such as are found fit for Service, and the others are turned again into the Country. Our *English* Horses upon the Forrest are not taken with less Labour; for we are forced to use many artful Devices, and even then take a great deal of Pains to catch them: And after all this Trouble we ought to be careful that they have the most gentle Usage, and make them as familiar as possible, at the first not suffering them to eat but when we feed them from the Hand, till they are acquainted well with us: You must expect they will not on a sudden part from their wild Disposition, but keeping them awake, and feeding them as I direct, will tame them by degrees.

THUS far I have given my Opinion concerning our natural bred *English* Horses, and *Irish* Hobbies. But when we see a fine Horse now a-days which was foaled in *England*, and bred of a Mare and Horse that were likewise foaled in the same Place, we cannot be assured that such an Horse is of a true *English* Breed, unless we could know farther of his Generation; his Grandfire, or Grandam, might be perhaps both Foreigners: But we may say thus much of Horses that are bred, or foaled, in *England*, though they are the Offspring of Foreigners, they will be stronger, and have a better Spirit, than if the same had been bred abroad; because the Food in *England* for Horses is more hearty and nourishing, than in any Country in
Europe,

Europe, our Grass especially, which is the principal or chief Food for Horses, is in greater Perfection in *Britain*, and *Ireland*, than in any Country besides : Wherefore in the hotter Countries they are forced for want of Grass, to cultivate Clover, Saint-foyne, &c. and feed their Horses with these and chopt Straw, and Corn : But chopt Straw is only for them when they are grown fit for Use ; they have only during their first two or three Years Clover, Saint-foyne, and such like.

BUT I come now to mention such of the Foreign Horses as are known in *England*, and are most esteemed.

Of the Turkish Horse.

THE first which I shall speak of is the *Turkey* Horse, or those we call *Turks* : These, however so called, are Natives of *Greece*, and bear an extraordinary Price with us, partly because of their extraordinary Beauty, and partly because of the great Expence in bringing them over to us.

THESE are finely Headed, somewhat like the *Barbary* Horses, they have beautiful Fore-Hands, and straight Limbs, rather small than great ; they have a most delicate Shape ; their Pace is genteel, and graceful ; and with all this they are Horses of good Spirit. Their Coats are smooth and short, and their Hoofs long and narrow, which is a Sign of Swiftnefs ; in a Word, they are Horses of great Beauty, Courage, and Speed. Their Colour is for
the

the most part grey, or Flea-bitten ; though I have seen some of a bright Bay Colour, but most of those we have now in *England* are of the first Sort.

Of the Barbary Horse.

THE next to this is the *Barbary* Horse, or *Barb.* These excel in Beauty of Shape all Horses in the World, especially in their Heads and Necks ; they are likewise very swift, even exceeding the *Turkish* Horses, and are chiefly distinguished from Horses of other Countries by the Fineness of their Proportions.

THESE are much valued to breed from, especially the Mares, which sell for a vast Price, and from them we train up Colts and Fillies for the Race.

THESE *Barbs*, as they have not the Strength of the *Turkish* Horses, so their Races should be upon hard Grounds ; for in soft deep Grounds they soon falter in their Speed. They are very temperate in their Diet, and will live almost on any Thing, and seldom take a Surfeit, or lose their Appetite.

As they are small, and slender of Stature, they are unfit for War.

Of the Neapolitan Horse.

THE *Neapolitan* Horse is highly esteemed for his Strength and Courage, which together with his gentle

gentle Disposition, makes him still the more to be admired. His Limbs are strong and well knit together ; he has a lofty Pace, and is easily instructed to perform any Exercise, which Perfections render him of great Use in the Wars. The only Fault which a nice Eye can discover in him is, that his Legs seem rather too small, but otherwise he wants nothing to command our Regard. You may best know him by his Head, which is long, lean, and slender, bending from the Eyes to the Nostrils like a Hawk's Beak ; he has likewise a very full Eye, and a sharp Ear.

Of the Sardinian Horse.

THE *Sardinian* Horse, and the Horses of *Corfica*, are like the former, but are somewhat shorter bodied, and of a more fiery Disposition ; which, however, a good Rider, who is a Man of Temper, may break, and bring them to good Discipline.

It ought to be observed, either in the Taming or Instructing of Horses, or other Animals, that they be used with Tenderness, rather than Roughness, and no passionate Person ought to be concerned in their Breaking, or Management : But a Man capable of such a Work ought to be patient, and a Master of Reason, and for want of this Consideration many a good Horse has been spoiled ; they have either been driven by the Passion of the Rider to over-strain themselves, or else to start, or fly out of the Way, at the least Touch of
a Whip,

a Whip, or Spur, and thereby endanger the Rider ; or to hate the Rider, and take every Opportunity of doing him a Mischief, either in Mounting, or when he is upon his Back, or at Dismounting.

WE have many Instances to prove that a Horse has a Memory, and will resent Injuries that are offered him. I have known Horses that would not stand to be shod by some particular Farriers, where they had before received some violent Usage, but would freely suffer shoeing by Strangers. Others have been so incensed at the Sight of any Farrier with his Leathern Apron, that they have used the utmost Efforts by biting, and with their Heels, to do them Mischief ; and we have heard of melancholy Accidents, that have happened to Grooms who have used their Horses with too great Severity

ON the other Hand, a Horse is a generous Creature, and is so tractable, that by discreet Means you may bring him to obey you in many Things. Some when they have been a little used to call at any particular Place, will, of their own Accord, stop at the same Place when ever they have Opportunity, and particularly at those Places where they have had the best Usage ; and it may be sometimes of good Use in Travelling to have a Horse that knows the Road, and especially if you travel by Night ; a Horse that is acquainted with a Road will, if you give him *his Head* a little, find his way in the darkest Night, and carry his Master safer Home than perhaps he could go, if he was

to

to press his Horse forward according to his own Will.

IN the champaign Countries, where the Snow has covered all the Land, that no Tract was left open, or the least Foot-Step could be discerned, nor the Riders could tell their Way, in the Night as well as the Day, I have known Horses that have taken the right Path, and have carried their Masters home safe. But one might write a large Volume of these Things, were we to descend to Particulars. I shall now proceed to speak of other Foreign Horses.

Of the Spanish Horse.

THE *Spanish* Horse, or *Spanish* Jennet, is a Creature of great Fire. This Horse is of a middle Stature, and generally well made in his Head, Body, and Legs; his Buttocks though they are somewhat long, yet they are strong and well shaped.

WHEN a Horse of this Kind has been well taught, there is not any Creature makes a better Show upon the Parade: He is not, however, a Horse that will hold long in his full Strength, as he has rather too much Spirit; perhaps for Half a Mile there is scarce a swifter Creature in a Race, but then his Strength fails.

THIS Sort of Horse is not generally judged fit for Action till he is six Years old, for they are not till then grown to their full Perfection, or Beauty;

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and

and their too great Fire, or Warmth, is not till then enough abated to render them serviceable.

It is an old Saying, *That a Spanish Horse grows one Year Before, and another Behind, till they are six Years old* : But I suppose this only means that they are not compleat.

THE last Thing which is compleat in this Kind of Horse is their Crest. They are naturally given to bound, and to make *Saults*, raising all four Feet at once from the Ground ; but as their Limbs are weak and small, they are subject to be Sinew-strained, or otherwise lamed, in a short Time after they are come to Service.

THERE is no Kind of Horse which has such open Nostrils, or snorts more in all his Goings, than the *Spanish* Horse : His Trot is somewhat long and irregular, or waving, for which Reason some curious Jockeys have chose to bring them to the Pace, or Amble.

Of the Poland Horse.

THE *Poland* Horse, or *Polander*, is not unlike the *Danish* Horse : It is generally about the Size of the *Spanish* Jennet, being a Creature of a middle Stature ; but has its Limbs much better knit together, and of much stronger Composition, than is observed among the Horses of *Spain*.

THIS

THIS Horse is in many Respects like our natural *English* Horse, excepting that their Heads are somewhat slender, like the *Irish* Hobby; but their Necks and Crests are raised upright, and very strong; their Ears are very short, and small, and their Backs capable of bearing any Weight; their Chines are broad, and their Hoofs are judged to be as good as those of any Horse in the World.

FOR these Reasons, where they can have good Education, they are frequently trained to the most difficult Lessons in the *Menage*, in *Saults*, &c.

THESE are likewise extreamly good in Travel, and will endure long Journeys with more ease than other Horses.

NOT long since, with a Sett of Horses of the *Polish* Kind, a Gentleman, as I am informed, drove his Chariot from *London* to *Newmarket* and back again in about sixteen Hours; which is perhaps more than any of our Horses commonly used in Coaches can do.

Of the German Horse.

NEXT to the *Polish* Horse one may place that of *Germany*, which is for the most part very tall, and large of Body: And although he is not very beautiful in his Make, yet he seems to be of great Strength; for he is frequently brought into the

Menage, and performs some of the most difficult Lessons with good Agility enough.

THIS Horse, however, I esteem better for the Draught, or Burthen, than for the *Menage*, or Action in the Field. As to his Paces he gallops very flow, or heavy, and trots very high.

Of the Hungarian Horse.

THE *Hungarian* Horse, which I shall next speak of, is generally hook Nosed, and has a thick Head, with large Eyes, narrow Nostrils, and broad Jaws; his Mane rough and thick, commonly reaching near the Ground; his Tail is likewise bushy, and long; his Body for the most part lean, and thin, and his Pasterns weak: But however some of his Parts are not to be liked, yet his Deformities are generally so well put together, that in the Whole he is agreeable enough. He is of a tollerable good Courage, and will endure Labour and Fatigue, for which Reason he is of good Service in War.

Of the Flanders Horse.

THE *Flanders* Horse differs in his Shape but little from the *German* Breed. This Sort is tall in Stature, his Head short and thick, his Body deep and long, his Buttocks round and flat, his Legs thick and rough.

THIS

THIS Horse, as well as the Mares of the same Kind, is esteemed principally for the *Draught*, in which he excels most Horses in *Europe* for his Stateliness; but for the Saddle is to be rejected, as being both uneasy and slothful.

THE *Flanders* Horse, and Mare, have an hard short Trot, but are much used in the Harness with us in *England*.

Of the Sweedish Horse.

THE *Sweedish* Horse is of small Stature, his Shape indifferent, and but of small Service.

THE Horses natural to that Country, are for the most part white, or of a dunn Colour, or pyed, and wall-eyed; so that unless they are improved by other Breeds, they cannot be ranged with those that are in good Esteem.

AND thus far having given an Account of the Horses which are said to be the natural Breed of several Countries, it will next follow to say something of the cross Strains, which come by coupling one Sort with another.

It is well known that in *Britain* have been bred Horses of all the Kinds I have mentioned, which have not only been as good as those bred in their respective Countries, but have been allowed even

to exceed them in Strength and Beauty : But as we may observe that every Kind of Horse mentioned above, is not designed for general Use, so it has been thought proper in our Trading, Sporting, and Warlike Country, to compose out of the Variety, such Horses as might prove useful in every Sort of Business. We have some of those for carrying Burdens, some for the Road, some for Hunting, others for Ambling, and others for the Coach or other Carriages ; some likewise for the Race, and some for the *Menage*, to be trained for War, or the Diversion of Great Men.

WHEN we come to the Mixing of Breeds, I find it is the Opinion of some, that such Horses as are to be trained for the War, should be raised from a Stallion of the *Neapolitan* Kind and an *English* Mare ; or if we have not one of the *Neapolitan* Horses, a *Turkish* Horse, if we can get it, is to be desired.

THE next Breed to be wished for, is between the *Turk* and the *Neapolitan* Mare, which produce a fine Race, and of great Worth.

THE Horses likewise (as some will argue) from *Corfica*, and *Sardinia*, coupled with the *Turkey* Mares, will produce a good Breed. We are likewise told that the *Spanish* Jennet with a *Flanders* Mare, produces an excellent Offspring. But without penetrating into this Nicety, we are sure that any of the aforesaid Kinds of Horses, when they
cover

cover a true-bred *English* Mare, will beget a better Colt, or Filly, than if they had coupled with their own Race in their own Country.

AND there is some Reason so to believe; because no Race of Horses in the World live upon such hearty Provender as those of *Britain*, where Liberty makes every Farmer capable of cultivating his Lands, and providing Plenty for himself and all about him.

THIS occasions every one of our Breed to be strong, and hearty; and when the Female is so, the Race springing from her must be so much better, as she is stronger than the Females which are fed in Countries where the Provender is more base, and less nourishing.

As to the Breeding of Horses for the Race; some Gentlemen choose to bring a *Barbary* Horse to an *English* Mare; others think both the Sire and the Dam should be *Barbs*: While on the other Hand, we find some rather are enclined to couple the *Barbary* Horse with the *Turkey* Mare; but any of these produce Horses of great Speed. The cross Strains which are now in Being are without End: However, when I speak of the best running Horses, if we trace their Families, we shall find them to spring from such Mixtures.

THE many Horse Races, which we frequently divert ourselves with in *England*, chiefly are per-

formed by such Mixtures in the Breed: For though one Horse truly bred of any particular Country may be swifter than another, yet if he wants Strength he will be a loser in a long Course ; or fall from his Speed if the Course happens to be wet or heavy : But the Couplings I speak of, when a Man has right Judgement to bring them together, may produce something wonderful at *New-market*, &c.

BUT as there is often an Inequality in Horses, so in all Matches for Horse Racing it is generally provided, that if an Horse is deemed stronger than his Antagonist, he must carry more Weight ; or else to run against him with a *Feather*, as they call it, which is the lightest Rider that can be had. If one is taller than the other, then the Allowance is Weight for Inches. And though all these Precautions are taken in Horse Racing, we are yet not come to any Certainty in that Science ; for *I have not heard of any Match that was not lost by one Side or other.* So unequal has the Ballance been, that sometimes Half a Mile more than ordinary has been the Death of a Horse. And thus much shall suffice for particular Kinds of Horses.

I SHALL in the next Place speak of Hunting Horses, for they are chiefly the Delight of the *English* Gentry ; and these ought to be nimble, full of Courage, and strong.

THE Original of the best we now have came from a cross Strain between the *Turk*, and the *English* Mare; or, as some say, between the *Barb*, and the *English* Mare: And it is certainly reasonable to believe so, seeing we are already sure of the natural Strength of our *English* bred Mares, and the good Courage and Swiftnes of the *Turks*, and *Barbs*. But every one in the breeding such Horses has his Fancy; some favourite Stallion, or some favourite Mare, is employed to raise the Breed from, and in this Opinions are different. One of any particular Breed will not be so good as another, though the same Care is taken in the Coupling of the Sire and Dam.

ALL that can be said is, that we should fix upon a Stallion of Vigour and Speed, and a Mare that is strong in Body as well as healthful, and one may expect well-bred Horses of Strength and Courage from them.

FOR the Ladies, the Pad, or Ambling Horse, is chiefly desired. A *Turk* for the Sire, a *Scotch* Powny, or the *Irish* Hobby, for Dams; these will bring between them a Race of such as will be natural Pacers; also the Breed of the *Turk* and the *English* Mare, if she be of the small Size, will fall naturally into the Pace or Amble.

FOR the Sumpter, or Pack, or Burthen, the *German* Horse is a right Stallion for a *Flemish* or *Flanders*

Flanders Mare; these will produce a tall and strong Breed fit for War, or carrying of great Weights.

If one of this Breed happens to be trained for the Army, his Rider, with his Accoutrements will hardly be less than thirty Stone.

THE Original of the *Northamptonshire* Breed of Horses, which is generally coveted for this Use, came from a Mixture of the Sorts I have mentioned.

THESE are also good for the Draught, either in the Coach, or Cart; and it has been thought by many, that the Mares of this Breed are as serviceable in Strength and Action as the Horses: And the Stallions, or Mares, of this cross Strain, are rather preferable to the original Sires, or Dams, being more habituated to the Food of the Country, or, as One may say, naturalized to the *English* Provender, than those which came from their respective native Countries.

WE have lately improved so much in the Breeding of Horses in *England*, by crossing the Strains, or coupling one Sort with another, that we have them in a greater Perfection of all Sorts, and for all Uses, than any Country in the World; which occasions the great Demand which foreign Nations have, when they are at War with one another, for Horses of the *English* Breed.

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It may be, perhaps, some Time or other, that we may have a War with some Foreigner ; and though I am no Politician, I think it adviseable to hint to my Countrymen, that, when they sell Horses to Foreigners on that Occasion, they may one Day or other be employed against us ; and that they should be wary on that Account : For it is seldom a Foreigner appears for such a Purpose, but employs some Jockey or other to buy for him ; and the parting with their Horses for such Use is almost as bad as parting with their Men.

It has been observed by some *English* Authors, that the best Horses are rather from the cross Strain, than immediately from the natural Breed of any Country, for our *English* Mares mend the Breed ; they strengthen the Joints of the *Spanish* Jennet, the Slendernefs of the Limbs in the *Turk*, or *Barb*, and the too long and rough Hairs about the *Pasterns* in the *Flanders* Breed.

In the latter Case, where the Hairs are long upon the *Pasterns*, it would be difficult for their Keepers to preserve them from the Malanders, or Scratches, which the *Flanders* Horse or Mare is frequently attended with, unless that Hair were singed or burned off.

SECT.

S E C T. I.

*Some Necessaries to be observed in the Erection
of a Stud.*

WHEN we have appointed a Place for this Purpose, which should by all means be disposed with Hills and Valleys, that the Colts, or Fillies, may the better be used to the Diversity of Grounds and Feed; we ought to have especial Regard to the Health of all breeding Mares and Horses; for some Distempers are Hereditary, and the Offspring from such will necessarily receive it, as well as the Imperfections of either the Sire, or Dam, in their Colour, Shape, or Merit.

THERE is nothing which destroys or injures a Race of any Kind, so much as the want of due Care in providing the Principals from whence the Offspring is to come.

THE Horse, indeed, which is the noblest Creature under Mankind that we find in the Animal Kingdom, for its Use and Beauty, is the most regarded in Point of Breed, while the Race of Mankind is almost neglected, as far as it concerns the Strength and Beauty of the Body.

WHEN we choose a Stallion, all Men of Understanding in *Horse Flesh* recommend Beauty of
Limbs,

Limbs, good Courage, and the Age to be about five Years for the Horse; and the same Perfections they require in a Mare, but she may be a Year younger than the Horse.

SOME depend very much upon the Colours; as for Example, Those which are *Black*, they say, are of a hot and fiery Temper and Disposition: Those which are of the *Sorrel* Colour are more wanton, and disposed to Venery: The *Chestnut* and *Brown Bay*, are reckoned to have Strength and Spirit: The *White* are always reckoned tender, and as much subject to Venery as the *Sorrel*; for which Reason I have known in the Coupling of Horses with Mares of these Colours, that the Mares have often *slipt*, or failed in their Productions. As to the *Grays*, it is observable, that those which tend the most to *Black* are stronger than the brighter *Grays*.

WE have yet other Colours in Horses, as the *Roan*, which seems to be the Offspring of the *Bay* and the *White*, or the *Bay* and the *Gray*.

THE *Sorrel* and the *White* seem to be the Authors of the *Dun* and *Cream* Colour; and for those Horses which we call *Flea-bitten*, or *Strawberry*, they are probably from a coupling between a bright *Gray*, and a *Bay*, and perhaps have suffered much in their younger Time by Ticks; especially if they have been neglected upon the Forest, or among

among Woods, or have not been taken up till they were three Years old.

WE have, besides these, such Horses as are *mottled*, or *pyed*, or, according to the common Phrase, are said to be *Pyebald*, either *Black* and *White* in Spots, or *Chestnut* and *White*. How this Accident happens is one of the most curious Questions among the Philosophers, and is not unworthy of their Regard.

It is long since I have attempted to resolve this nice Question ; but as in one Case one cannot pretend to determine any Thing in Nature, I have had recourse to other Subjects which seems to me the most nearly allied.

A VARIEGATED or striped Plant, seems somewhat like the pying or spotting of the Horse, or any other Cattle, and may likely proceed from the like Cause, as some may imagine ; for the White in the Leaves of Plants seems to be occasioned by the same Law in Nature which directs the White in the Hairs of Beasts, or the White in the Feathers of Fowls.

THE Query is, Whether the White in the Hairs of Beasts, or Feathers of Fowls, is not a Sign of Weakness, as that Colour is certainly when it appears in the Leaves of Plants ? If it be so, then all Horses, or Cows, that happen to be of a white Colour, would be weak in their Joynts, or be somewhat

somewhat distempered from some Indisposition in the Bodies of their Progenitors: But this is yet a Query. It is therefore the more necessary to take care to examine into the Descent of a Horse and Mare that we design to breed from; for as I am not confirmed in my Opinion how far the white Colour may be a Token of Weakness in Cattle, such an Accident may perchance happen when neither the Sire, nor the Dam, partake of that Colour: But I shall be glad to know from the Curious what they have observed on such Occasion.

ONE Thing which might come near towards a Resolution of the Question we have in Hand, would be To enquire into those Families where black Men have coupled with white Women, or white Men coupled with black Women, in order to know if the Father was black, whether the Child was of that Colour; or whether the Child was black if the Mother was of that Colour, with a white Father. And moreover, whether this cross Strain will not produce sometimes white, and sometimes black, Children; or sometimes those of a tawny Colour, or Mulattoes; as also it would be requisite to know, whether the Black Children in three or four Generations, do not produce Children of a tawny, or Olive Colour; or, whether the Offspring of the Blacks with the Whites, instead of the Wool, do not bring long black Hairs on their Heads, or perhaps white Hairs, and a tawny Complexion.

I GUESS

I GUESS that the People of *Barbary*, and of all that Coast of *Africa* lying opposite to *Europe*, are of the Olive Colour, from the coupling between the *Moors* and the *Europeans*, while they were endeavouring to make their Progress into *Europe*, but in *Spain* especially ; for we find upon all the *African* Side of the *Mediterranean* a People of the Mulatto Complexion, some of them with very black Beards and Hair, and others very white, as most People about *London* have seen Instances of, in the Ambassadors and their Retinue, which have lately been here. (now 1728.)

ONE remarkable Subject relating to the Case I am now descanting upon is, That some Years ago a Person was brought over from the *West-Indies*, who was pyed in his Skin white and black, and it is supposed, that the same Man was the Offspring of Parents which were of different Colours, the one White, and the other Black.

HINTS of this Kind may lead Philosophers into a better Way of Thinking than at present I shall pretend to.

BUT if I may take a little further Notice of the various Colours in Animals, such as the Mottlings, or Spottings of all Creatures in their Hair, Feathers, &c. they seem to be occasioned by cross Couplings; for I know a Gentleman near *Farnham* in *Surrey*, who has had a Breed of white Kine for many Years

Years, without any cross Colour mixing with them, that produce to this Day Calves of the same Colour.

ANOTHER has had a Breed of white Fowls above forty Years, that has not once shewn the least discoloured Feather.

So I have likewise had a Breed of white Pheasants, which till they came to be mixed with Pheasants of the common Colour, always brought Poultts of a white Feather; and as soon as they brought young Ones from the cross Couplings, the Breed was altered, and the Feathers of the young Fowls did partake of the common Colour, as well as of the White, *i. e.* they were generally mottled, or pyed, unless now and then one all white; according as I suppose the white Pheasant Cock had been the Impregnator of an Egg, which I believe he got at with some difficulty, for the common Pheasant Cock was Master of the *Pheasant Penn*, and used commonly to drive the other from the Pens.

THOSE who have bred Canary Birds know very well, that when they begin with a white Cock and Hen, they will not have Birds of any other Colour, unless they couple those with others of the common Colour.

So in Warrens that are first stocked either with all white, or all black, Rabbits, the Breed will be
 T accordingly,

accordingly, either all white, or all black, unless they come to a cross Coupling.

PIDGEONS likewise that are of a white Feather will produce a Breed of the same Colour constantly, unless they couple with Pidgeons of other Colours, and then they will produce a mottled Race, or such as are of a mixed Colour.

A GENTLEMAN of great Curiosity and Candour assures me, That for more than eighty Years there has not been any other than white Horses belonging to his Family, excepting such as were bought in from other Breeds. The Originals of *his Race* were a white Horse, and white Mare, which, at the Time of their coming into his *Studd*, were held as great Beauties. He likewise observes, That a Gentleman (his Neighbour) of considerable Fortune, had his *Studd* furnished, many Years ago, with Horses and Mares of a black Colour, and that keeping his Breed constantly without Mixture of any other Colour, the Offspring are all black, like the Dam and Sire.

IN the variegated or striped Jasmine among Plants, if the White is on the Edge of the Leaf, that Colour and Disposition will never be lost in any that we raise from it, but every one will be like unto the Original Plant.

AGAIN, if the common Jasmine happens to be stained with Yellow in the Leaves, or pyed, or spotted

Spotted with that Colour, which is what the Gardeners call a *Blotch*, or *Bloch*, all the Descendants of that Plant will be the same ; or if we bud, or inoculate, any of the blotched Kind upon a Jasmine that has its Leaves all of a pure green Colour, it will become of the same mottling or blotched Disposition.

It is a Difficulty which we can hardly overcome, to examine the Breed of Fish, and the Alteration that may be made by cross Strains. A Gentleman of Curiosity tells me, he stocked his Pond with Tench, partly from a running Water, and partly from a fenny Water, and in some Course of Time he had a mottled Breed, between the black and the gold Colour ; the Tench of the Rivers being generally of a bright and golden Colour, and those of the Lakes more dark and tending to black.

BUT in the Breeding of Insects, though I have mixed many Varieties together, in the same Room, as Butter-Flies with Butter-Flies of contrary Colours, yet I could never find that any painted Sort would mix with the white Kind, or with a Kind not strictly the same with itself: So that excepting in this Case of Insects, one may likely produce Breeds either in Beast, Fowls, Birds, Fish, or Plants, of various Colours, and differing from the Principals, by cross Couplings.

AND now I shall leave my Reader to judge what Colour in a Horse he likes best, as well as to consider of the Use that may be made of the Hints I have given above with regard to the Colours of Creatures.

AN Author of good Credit, when he treats of the Mixture of Breeds in Cattle, and Horses especially, advises, with a good Deal of Reason, to take care of the good Qualities both of the Horse, and Mare, his Words are, ‘ A Clown may beget
‘ a beautiful Son, but will never beget an heroical
‘ Spirit, but it will ever have some Touch of Baseness.’ So an ill-bred Horse may beget a Colt which may have fair Colour and Shape, appearing beautiful; he may be strong and vigorous, but of a vicious Disposition, which may render him incapable of ever being brought to Rule without half destroying him.

SOMETIMES the Fault of a Colour is corrected by a Sort of *Dying*, or *Staining*, which some of our Jockeys know how to do, upon *Grays*, *Whites*, or *Duns* especially. I remember three or four Instances of this, where some Noblemen of my Acquaintance that had employed some Country People to buy them Horses of a certain Standard, in Body, Colour, and Mark, to match with their Setts, did in a few Months, when the Horses had shed their Coats, find *Grays*, and other Colours, instead of *Blacks*. I cannot say, however,

however, that the Dying of the Hair of Horses can do the Cattle any Harm; (for I have seen them healthful and strong long after they have recovered their original Colours,) any more than the Chymical Water will injure the Persons that use it to alter the natural Colour of their Hair from Red to Black, &c. as is frequently practised now days.

BUT to return, I cannot help observing what a Man of good Skill has given us concerning the Choice of a Stallion, with regard to his Colour; for I would have my Reader know every Thing of this Sort which I think to be in the way of good Judgement: My Author says, That the dapple Bay, the bright Bay, and the dapple Gray, are to be desired; and he will yet allow, as tollerable good, the Horse of a pure Black, provided he has a white Star, and a white Foot; but rather, in the Judgement of others, a Stallion should be all of one Colour.

WE find in many Cases, that the Horses of a bright Bay Colour, with a black Mane and Tail, are good, as well as beautiful, and these have commonly the Tips of their Ears, and the extreme Parts of their Legs, black; as it is also common for a dapple Gray to have a white Mane and Tail, with the former mentioned Extrems white, such as the Tips of the Ears, and the extream Parts of the Legs: But for other coloured Horses, except the Dun, we seldom find their Manes and Tails of a

lour different from that of the Body ; but in a *Dun* Horfe, the long Hair in the Mane and Tail is commonly black, and for the moſt part there is a black Liſt down the Back, which is not a little remarkable, as it is not obſervable in any other Creature except the Aſs, or Mule, that I know of.

IN the Horſe, indeed, it is only a plain ſtraight Liſt ; but in the Aſs there is always a croſs Stroke of black over the Shoulders ; ſo that if the Skin was to be opened and ſpread, the black would exactly repreſent the Figure of a Croſs, as we have it preſented, or cut, for a Crucifix.

SOME have made extraordinary Remarks on the Croſs upon the Aſs's Skin, *viz.* That before the *Christian Æra* Aſſes were not thus marked, and that at preſent none are without that Sign : For my own Part, I have never ſeen any without it ; while, on the other Hand, I do not find any of the firſt Writers that have taken notice of it ; notwithstanding, that in the firſt Times Aſſes were undoubtedly put to as great uſes in Carriage, &c. as they are now, and perhaps much more, as appears from many Paſſages in the Old Writings.

SOME will hold, that the black Liſt down the Back is a token of Strength, becauſe the Aſs that is marked with it is accounted the ſtrongeſt backed Creature in the World, among Animals, conſidering his Size : It is for this Reason, in one Senſe, that

that the Affes are chosen with us to carry heavy Burdens, and to draw heavy Loads, and the Milk of the Females is so much esteemed for Consumptive People.

THERE is one Remark, which a learned and excellent Physitian has made of the Afs's Milk, *viz.* that it will not *curdle* with acids, as Cow's Milk will do ; or as the Farmers generally call it, *set for Curds*.

IF this List therefore is a Mark of Strength in the Afs, I suppose it is not less so in the Horse ; for which Reason I judge, that this List upon Mules is a token of their great Strength ; and as they proceed from Couplings between the Horse and the Afs, so I am of Opinion that the List comes from the Afs generally speaking.

BUT as these Observations may be lyable to be contradicted, perhaps, by some or other, who by unforeseen Accidents in Coupling, may have had Colts, or Fillies, engendered, that were not of so extraordinary Value as the Sire or Dam ; yet I am pretty well assured, that if they look well over the foregoing Memorandums, and consider them as they ought, they will carry some Weight with them, and be of Use in the Choice of Stallions.

BUT the Age of the Stallion should also be regarded ; which some particularly insist upon, *i.e.* that an Horse should not be under five Years old, nor

above fourteen or fifteen Years, when he covers a Mare; for in that Time an Horse is in full Strength, and therefore it is not unreasonable to suppose that the Colts got by him in his Prime, will likewise share of his Vigour.

IT is indeed common, in many Parts of *England*, to suffer an Horse to cover a Mare at two or three Years old; but those Couplings seldom are successful: They are in the first Place apt to fail, or miscarry, if either the Mare or the Horse is so very young, and sometimes the Mare is entirely spoiled for breeding; or if there happen to be a Colt, or Filly, from such a Coupling, it will never be of large Stature, or of great Strength.

NEITHER would one choose to let Horses cover the Mares till their thirtieth Year, as some do, lest the Colts got by them may be subject to the same Faults as would be if they were got by too young Horses.

BUT Mares will breed till four or five and thirty Years, as I know by an Instance at *Bloxham* in *Lincolnshire*, where a Mare brought a Colt in her four and thirtieth Year; and it is to be observed the Mare had all along been kept at Grass.

AN Horse, if he is kept for a Stallion, will be fit to cover Mares the longer, as he has less Service of that Sort; as a Gentleman of *Derbyshire* informs me: For he observes, that a Stallion of an extraordinary

extraordinary Sort, which his Family has kept above thirty Years to serve only about four or five of his own Mares, is yet in as good Plight as ever; while other Stallions about him, which have been as well kept as his, and have been let out to all Comers, were not capable of this Service at twenty Years with certainty; or if the Leap was certain, the Colts as surely failed in their Eyes.

IN the next place, it is necessary to observe an Horse whether he be Old or not (if he has had good keeping during his Life) by examining whether his Eyes are full, and his Body in good Condition: As also whether he has Courage, his Coat smooth, and the Hollows over the Eyes full as some expert Jockeys tell us; for if these Particulars meet, they conclude an Horse is young and fit for Generation.

SOME would have us try the Age and Courage of a Stallion, by taking up Part of his Skin, and if it return quickly to the Body and become smooth, it is a Token of his Vigour and Youth; otherwise, if it remains some small Time without returning to the Part from whence we pull it, we have a Token that the Horse is old or infirm; and if we observe the Contraries he is fit for Business.

THERE is a Way which some use when they have a Mind to try whether an Horse is young or old, which is to take the Tail or Stern next the Buttock,

Buttock, between the Finger and Thumb, and, pressing that Part hard, if they find the Joint there, bigger or more prominent than the other Joints of the Tail, (as big perhaps as an Hazel Nut, or thereabouts) then they conclude he is under ten Years old; but if that Joint be equal with the other Joints in the Tail, the Horse is supposed to be past that Age.

THE sure Way, however, for some time to know an Horse's Age, is by the Mouth, *viz.* if he has changed no more than the four first Teeth, or foremost Teeth, then he is two Years old.

IF he has two Teeth below and two above to change or about changing, *i. e.* if the Teeth are respectively opposite to one another above and below, the Horse is then three Years old.

IF he has one Tooth above and one below, on each Outside of his Jaw, then he is four Years old.

WHEN he is five Years old his Tushes or Tusks are changed or renewed.

IN his six Year his Teeth are compleat, except that his under *Tushes*, as the Horsemen call them, have Circles or fleshy Rings about them distinct from the Gums, and the outward Teeth on each Side have little Holes on their Tops, which are generally black; and as soon as these Marks are not to be found, we may say *the Mark is out of*
his

his Mouth, and one may be sure he is Eight years Old.

ANOTHER Remark I have heard, which is, After *the common Mark is gone*, if an Horse's Teeth be smooth and long, *cutting* or grinding even and close, notwithstanding they may be yellow and foul (which Discolouring happens chiefly from their Diet) they may be guessed to be about twelve Years old.

SOME would insinuate, that if an Horse's upper Teeth reaches, or crosses over the lower, and are uneven and worn, and his *Tushes* or *Tusks* long, foul, and thick, then he is about fifteen Years old.

AGAIN if an Horse's *Tushes* are uneven and worn down quite to the Gums, then he is full twenty Years old, if not more.

AND if dark coloured Horses become grey or grised above their Eyes, or under their Manes, we may be sure they are very old.

I HAVE already mentioned a Mare that brought a Foal at a great Age, and there have been Instances of Mares that have brought upwards of twenty Foles a piece: However it is not commonly so.

MARES will at sometimes have a more particular Desire to Horses than at others ; when this Desire is upon them, in some Countries it is called the *Pride of the Mare*, in others it is said the *Mare is fine*, and in others that she is *horsely*: But as these mean the same Thing, *i. e.* that the Mare is then in a better Capacity of receiving the Horse than at other times, it is adviseable to have her to the Horse while she is thus inclined ; and as the Diet or Food happens to be rich or base, so is the Mare sooner or later brought to that State.

‘ IT seems that the old Authors such as *Palladius*, *Pliny*, &c. had a set Time for putting the
 ‘ Mares to the Horses, and letting them run together : But the Difference of Seasons and Climes,
 ‘ as well as the Difference of Food will surely make
 ‘ that Matter to be uncertain.

WITH us it is best to bring the Mare to the Horse in *March* or *April*, and not like the Ancients allow their Coupling so late as *June*: For then we cannot expect our Mares to foal till the Weather is too hot to afford sufficient Nourishment for the Mare, and the Starving of her at that time makes her bare of Milk, and consequently the Foal must suffer.

THE best is to have the Fole drop soon in the Spring, it will then grow hardy, and the Season will be before it for Increase of Nourishment, and

it will better gather Strength before the Cold of the Winter comes on.

A MARE goes with Foal eleven Months and about eight or ten Days over; so that about the same Time of the Year that she is covered, we may expect a Foal from her.

‘ AN Author of Note tells us upon this Head,
 ‘ that if a Foal fall early in the Year, as the Year
 ‘ increaseth with regard to Warmth and the
 ‘ Production of Food, so the Milk of the Mare
 ‘ will increase,; but if a Foal fall at Midsummer,
 ‘ then the Year decreaseth, the Meat and Milk will
 ‘ decrease, and then the Foal will taste in his first
 ‘ Mouth the best Food, and when he can eat
 ‘ least have the greatest Plenty.

A MARE will certainly desire the Horse about nine Days after Foaling, which she then should have brought to her; for then she will more surely *sitt* or become pregnant; and if she *bold*, she will not suffer any Horse to come near her a Month after coupling.

It is also necessary, when a Mare that has foaled shews her Disposition to Horsing, that she be presently served, for otherwise the Colt would be endangered. I have known some bite, kick, and pinch their Colts for Want of this Care, and as soon as they have taken the Horse, have been quiet.

ONE may perceive when a Mare is in her *Pride* by her running back when she hears a Horse neigh, or by her coursing about the Pastures, not careing to stand still in any Place; and if Mares only are in Company, the proud Mare will endeavour to *Leap* the others, and will piss more frequently than usual. ‘ These Creatures, as a certain Author ‘ says, though they cannot speak, can make Signs ‘ of their Desires.’

IN Studs where Horses are turned among Mares, no more than one Horse should be in one Enclosure; for if two are put into one Place they will fight, and very likely destroy one another.

BUT as our Way is commonly to keep the Stallion in the Stable if he be a Foreigner of a warm Country, so there is some Caution to be used in bringing him out to the Mare: Let two Men lead him with long Reins; and if the Mare will stand him, let him Leap her directly, and as soon as he has covered her, *while the Horse is dismounting*, sling a Pail of cold Water on the Mare’s Part of Generation, which helps to close it (as some say) and makes her retain the Semen of the Horse, unless you suffer the Horse to come a second Time; let her then be trotted a Mile down Hill, and feed her well for a Day or two afterwards.

IF the Mare will not stand the Horse in his first Attempt, lead him round her once or twice, so

so that she may see him, and if she is desirous of an Horse she will receive him. I have known in some Towns in *England*, that Mares have been brought for this Purpose, that were not disposed for Horses, and have spoiled the Stallions that have been brought to them by Kicking, &c.

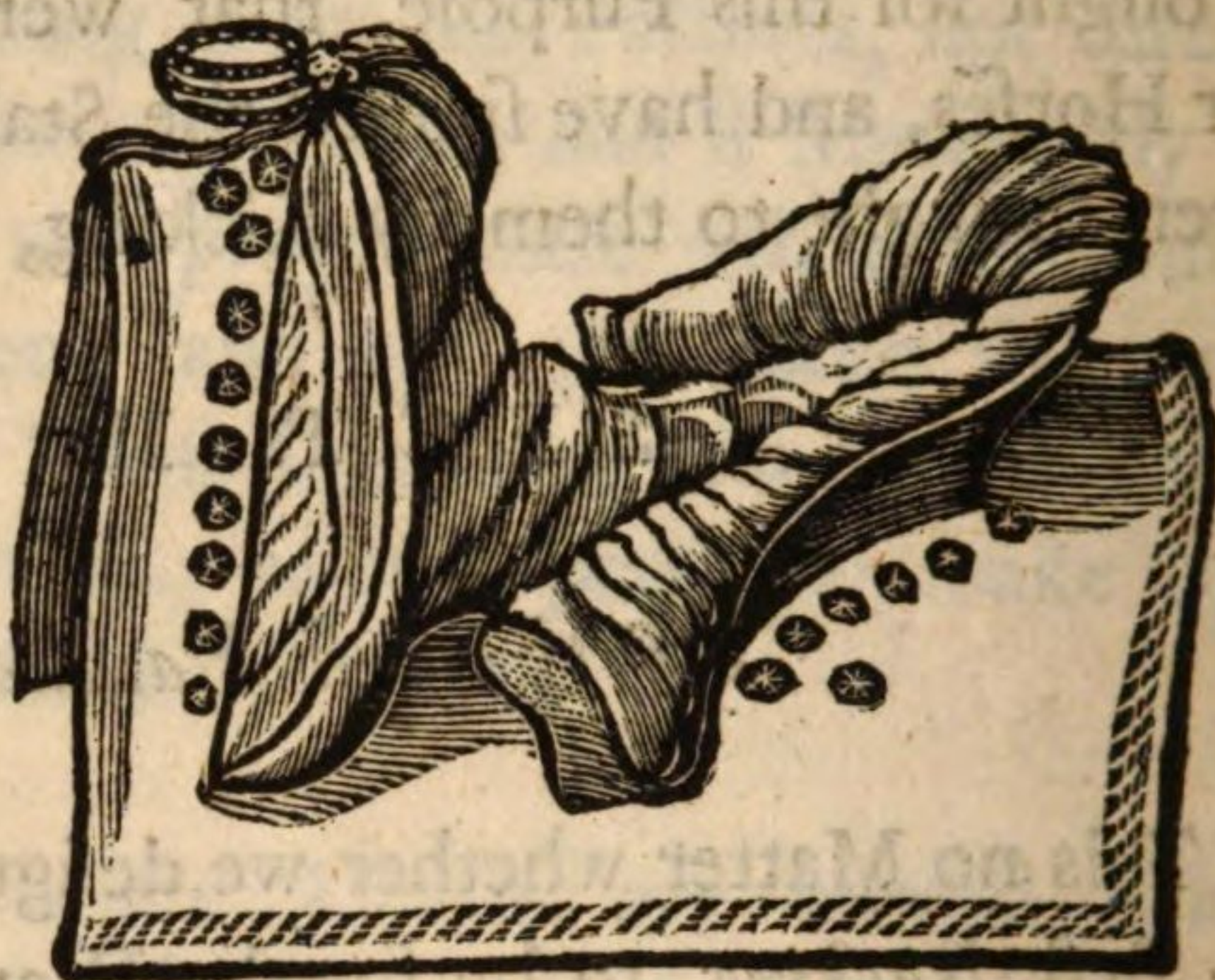
S E C T. II.

Of the first Saddle.

IT is no Matter whether we design a Colt, at the first *Backing*, to be for the War, for the Race, or for the Chase, when we put him on the first Saddle. For though some of the old Writers would insinuate, that the first should be light, or made only of a pad of Straw; their Opinions are not to be received with us concerning that Point; for considering how wild, or *fresh taken up Colt*, will behave himself upon the first Backing, it is very necessary that the Man who happens to be his first Rider should be well seated, so that the Horse may not be his Master in the first Attempt.

'Tis

'Tis for this Reason the Duke of *Newcastle*, in his famous Book of Horsemanship, has recommended the Saddle here annexed, as the safest for any one who does mount an ungovernable Colt, whereby the irregular Kicks and



Turns of the Wildest or most Ill-natured can do no Harm to the Rider.

It is common, at the first Backing, for most Colts, to rise straight up on their hind Legs, and use all their Endeavours to cast their Rider, or to fling up their Heels, to throw him over their Heads, and even to use their natural *Caprioles*, or some other Means to discharge themselves of their Weight.

AND when we consider that a common Saddle is only used when Horses are already reduced to good Manners, what I recommend will be more easily understood to be reasonable.

BUT this Saddle is not only used for breaking of Horses, but is likewise useful in the *Menage*, where the Rider is obliged to undergo many Difficulties in the several *Lessons* in Horsemanship, on
Horses

Horses that have been already taught their proper *Lessons* of Capriole, &c. which the most expert Horseman could not sit without such a Saddle; so that in effect this Saddle may be a Means of saving many a Mans Life.

SOME are so curious that they will dust the first Saddle over with *Oat* or *Horse-bean* Flower, and let the Horse smell to it before they put it on his Back, giving him at the same time some Bread or other delightful Provender.

AND it is not unnecessary to rub his Back with it before you put it on, stroaking him on his Sides at the same time.

WHEN you set it on his Back, let it only remain there a Minute or two, and take care to feed him all that Time; take it off and replace it the first Day three or four times without attempting to get on his Back; let it at last settle, giving the Colt then such Words as you think may please him best; for an Horse will ever retain a Liking to the favourable Impressions he first received: Then feed him and use him generously.

WHEN the Colt is a little familiar with the Saddle, set it on firm as forward as you see occasion, always considering the Make of the Horse, whether he is *low before*: But however, the forwarder a Saddle is placed, with so much the better

U

Figure

Figure and Grace will the Horseman that fits him appear.

WHEN the Saddle is placed, let one Man deliver the Girths to the other, who must fasten them in such a Manner that the Saddle may not move from its first Seat by any extravagant Motion of the Horse; but let the Girths be buckled by gentle degrees, till it is firm.

WHEN you put on the first Saddle, be sure to let the Stirrups be buckled up, that the Horse may not feel them when the Saddle is put on; and when that is done let them down gently, and lead him forward, that he may feel the Stirrups by his Sides, and come a little into the Knowledge of them.

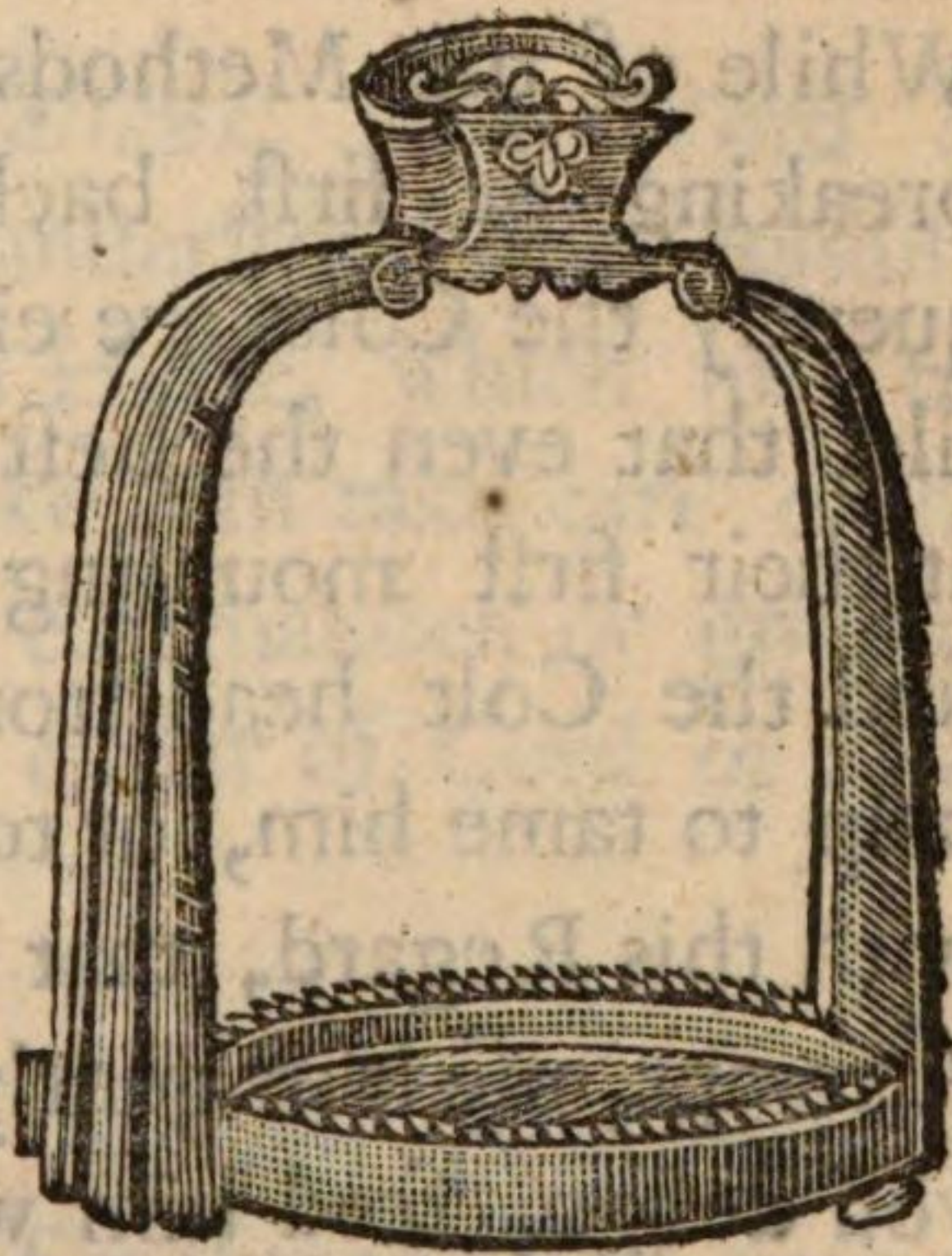
Of the Stirrup or (STRAP.)

THE Stirrup or (STRAP) is of great Use in the Affair of breaking Horses, for without it the Saddle is not sufficient to keep a Man firm in his Seat, if the Horse happens to be unruly; it is a Stay for the Horseman's Feet, and prevents many Misfortunes, besides giving the Rider the better Management of his Heel or Spur.

It would signify but little, here to give a particular Description of the several Forms of Stirrups that are in Use, seeing their Shapes may be varied according to the different Fancies of Men: It is
more

more material to mention some Defects that ought to be avoided in our Choice. For some are made so slender and weak, and withal so close, that neither have they Strength sufficient to bear a Man when he would lean on them, nor will they readily admit the Foot of him that is mounting; as it will be no less difficult to disengage it, should one chance to be thrown; by Reason of which Difficulty many have lost their Lives, having been dragged by the Stirrup till their Brains were dashed out, by Horses that have run away, as I myself can witness.

THE surest and safest Sort of Stirrup, which is now in use, is that of the annexed Figure, invented by the Duke of *Newcastle*, which is both of a Strength and of a Width sufficient, having proportionable Room to set One's Foot in, and to discharge the Foot from it without hindrance.



It should be used especially in Breaking or at the first Backing of Horses, wherein all Dangers may be expected; though a Jockey ought to fear none: *But a little Thought may sometimes save a Neck.*

IT is true, we can ride with Stirrups that are not so large as this Kind ; but then we ought to be sure or well acquainted with our Horses.

AN Horse may be very well bred and trained, and of himself well disposed ; but the Firing of a Pistol, or any accidental Noise, may give him a Fright that may be the Death of his Rider, unless the Tackle about the Horse be good and proper.

BUT it is not sufficient alone to be well seated in the Saddle ; it is not less, yea more necessary to command the Head of an Horse. I speak all this While of the Methods that should be taken for breaking or first backing an Horse ; for frequently the Colts are either so resty, or so volatile, that even the best Horseman will be puzzled at their first mounting. Plowed Grounds, if we find the Colt headstrong and given to run, will help to tame him, or to ride him up Hill ; always with this Regard, that as he begins to sink in his Attempt, use him gently, and if he does any Thing you design, feed him with Bread or Oats.

HIS Grace the Duke of *Newcastle*, for the better governing a Colt's or young Horse's Head, recommends the Musroll or the Cavezon, and that we must consider how to render the Horse elegant in his Actions, and to restrain him from his natural wild Leapings, &c. as we have taken care before to secure our selves in the Saddle.

Of

Of the Musroll and Cavezon.

THE *Musroll* and *Cavezon* are in effect the same, though their Make indeed is somewhat different; and these we had primitively from the *Neapolitans*. Some call the *Musroll* a *Nose-band* or *Head-strain*, because the Place of it is always over the Nose, which it commands by pinching it, and bringing the Head of the Horse *in*; by which means the first great Riders could break their Horses and bring them to a genteel Carriage without any Bridle.

Cavezzana of the *Italians*, is a Word of old Date, and, by it, is understood any Binding fitted over the Nose of an Horse, which may regulate his Actions and make him take care of his Steps: This *Cavezzana* is commanded or governed by Reins of any Sort, either of Cord or Leather.

THE first of these that we can trace, was of *Naples*, and only made of a strong well twined Cord; the Nose-band being about four times the Thickness of the Cord that made the Rein.

THIS, by pulling or straining it, would pinch more or less the Muzzle of the Horse, and force him to bring in his Head, as well as render him obedient to his Rider's Will,

BUT after the many Mixtures of Horſes one with the other, it was not ſufficient to curb the extraordinary Spirit of ſome Horſes, or check the headſtrong Diſpoſition of others; therefore other *Cavezons* of ſharper Diſcipline were invented, ſuch as irregular Chains of Iron to go over the Noſe; and when theſe were yet found to be too mild for ſome Horſes of ill Temper, thoſe in the Figure annext, were contrived, *viz.*

A *CAVEZON* made of two Pieces of Iron hollowed and joynted in the Middle, and full of ſharp Teeth, by which the moſt ſtubborn Horſe might be brought to Reaſon as was ſuppoſed.



THIS *Cavezon* which is the uppermoſt in the Figure, was very ſevere and brought many Horſes to reaſon, but wounded them on the Noſe; it was governed by Reins like the corded *Cavezon*: However it was not thought ſevere enough by ſome for the Correcting of young Horſes; and either for that Reaſon, or for the Sake of having ſomething *New*, there was a *Cavezon* contrived of three Pieces, as expreſſed in the lower Figure, ſo that

that the Choppes of the Horse might be more severely pinched than by the former.

THIS *Cavezon* of three Pieces is of so severe a Design, that I think an Horse may suffer greatly by the Use of it: For if he is fractious, he must necessarily be wounded grievously in the Face, and such Wounds, if not dressed by a skilful Hand, may prove of ill Consequence; besides rendring the Horse malicious, and disposing him to treat his Rider when ever he comes near him, with such Usage as he may have occasion to repent of.

IF we sufficiently observe the Fashion of the *Cavezon* of two Pieces above, as well as that of three, the *Cavezon* of one Piece only may be well enough understood without giving a Figure of it.

IN the *Cavezon* of one Piece, the Teeth are not made so sharp as in those of two and three Pieces; but then there is this Inconvenience in it, that such a one will not serve for every Horse: If it be too small for the Horse's Nose, it gives him Pain when he wants no Correction, and that will make him stubborn and vitious when ever his Rider gets upon his Back. I think when any of these are used, a discreet Hand should have the Government of them; for however generous an Horse may be in his Nature, he will surely remember Affronts, and have his Revenge whenever he

meets an Opportunity. *Generosity provoked, makes the most dangerous Enemy.*

THERE is one Thing to be observed in the last mentioned *Cavezzon*, viz. that as soon as the Rider quits his Pressure upon it the Horse is not any longer in Pain by it, but it becomes free and leaves the Horse at Liberty.

The famous Duke of *Newcastle* before mentioned, *like a Gentleman*, shews his compassion towards Horses in the Breaking of them, in the following Words.

‘ POUR moy je conseille tousjours la douceur
 ‘ & la patience avec les bonnes leçons, et jamais
 ‘ d’ offenser le cheval si l’on peut empêcher ;
 ‘ de ne le Monter, ou de ne prendre de luy que
 ‘ la Moitié de ce qu’il peut fair. Ainsy vous ne
 ‘ le preserverez pas seulement, mais aussy il pren-
 ‘ dra plaisir a tout ce qu’il fera, et il vous aimera &
 ‘ le Menage : Autrement il vous haïra, et fera
 ‘ harassé dans le Menage ; au lieu que luy devriez
 ‘ faire prendre plaisir, autant qu’il vous est possible,
 ‘ tant à vous qu’au Menage, qui est en le travail-
 ‘ lant peu à chaque fois, étant prodigue en vos
 ‘ recompenses & caresses, & chiche en vos châ-
 ‘ timens, sans être jamais fâché lors que vous le
 ‘ châtiés.

WHICH carries so much Generosity with it, that I cannot help giving my Readers, who may hap-
 pen

pen to be unacquainted with the French Language, my Sense of that great Man's good Nature.

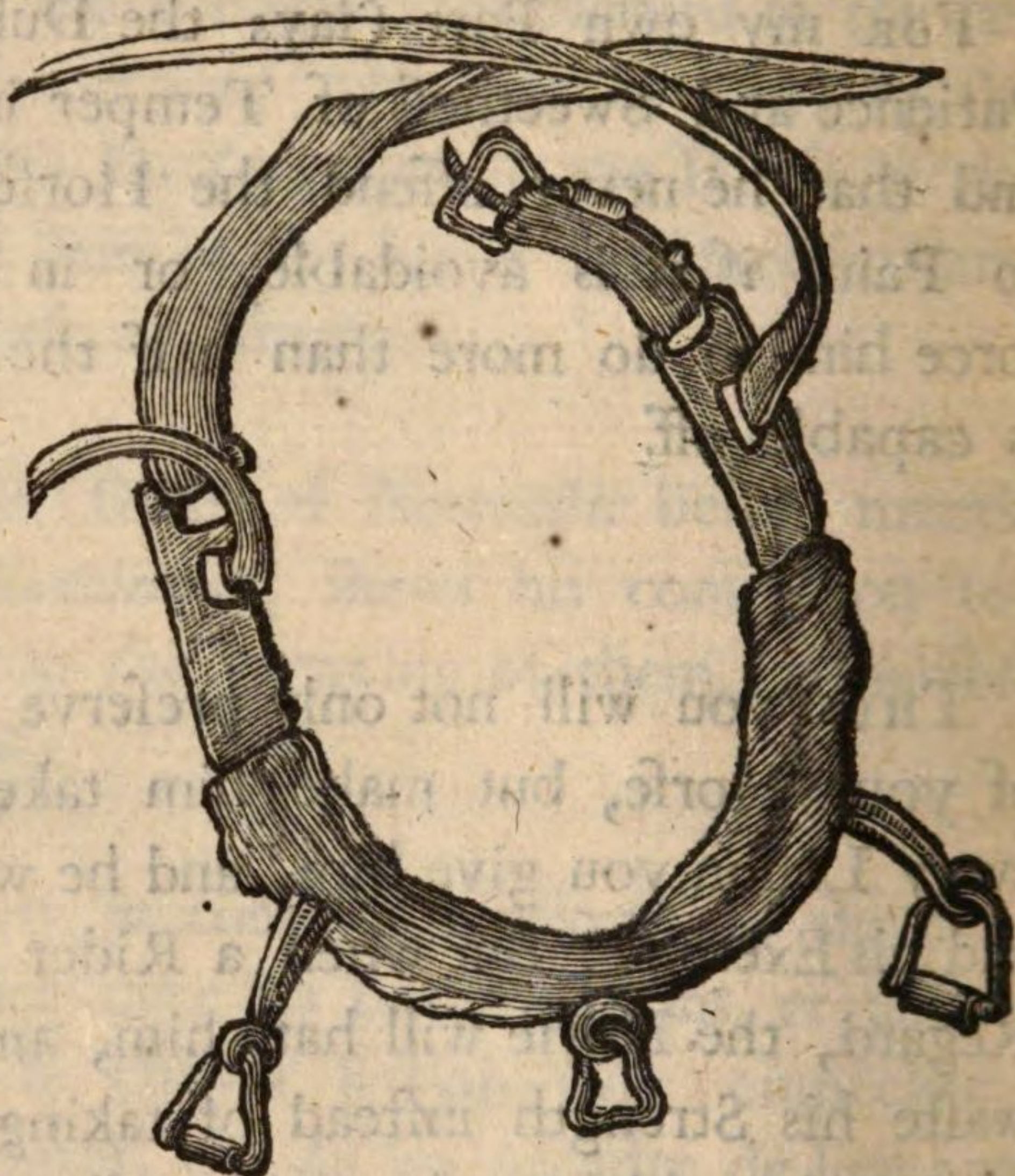
FOR my own Part (says the Duke) I advise Patience and Sweetness of Temper in the Rider, and that he never offend the Horse or put him to Pain, if it is avoidable, or in his Exercise, force him to do more than half the Business he is capable off.

THUS you will not only preserve the Strength of your Horse, but make him take Pleasure in every Lesson you give him, and he will love you and his Exercise: But when a Rider has not this Regard, the Horse will hate him, and by fretting waste his Strength instead of taking Pleasure in his Work, which ought principally to be regarded as well for One's own Pleasure, as the better bringing the Horse to discipline.

WHEN he does well, be liberal in your Rewards, and cherish him with such Favours as may be most acceptable to him; but be sparing in your Chastisements, and never correct him in a Passion.

HIS

HIS Lordship therefore is against the more severe *CaveZons*, and recommends first a single one covered with Leather, such as the Figure adjoining represents; this he calls the common *Ca-veZon*, and is to be used for an Horse of the milder Disposition, and will correct him, as he informs us, much better than a Bitt.



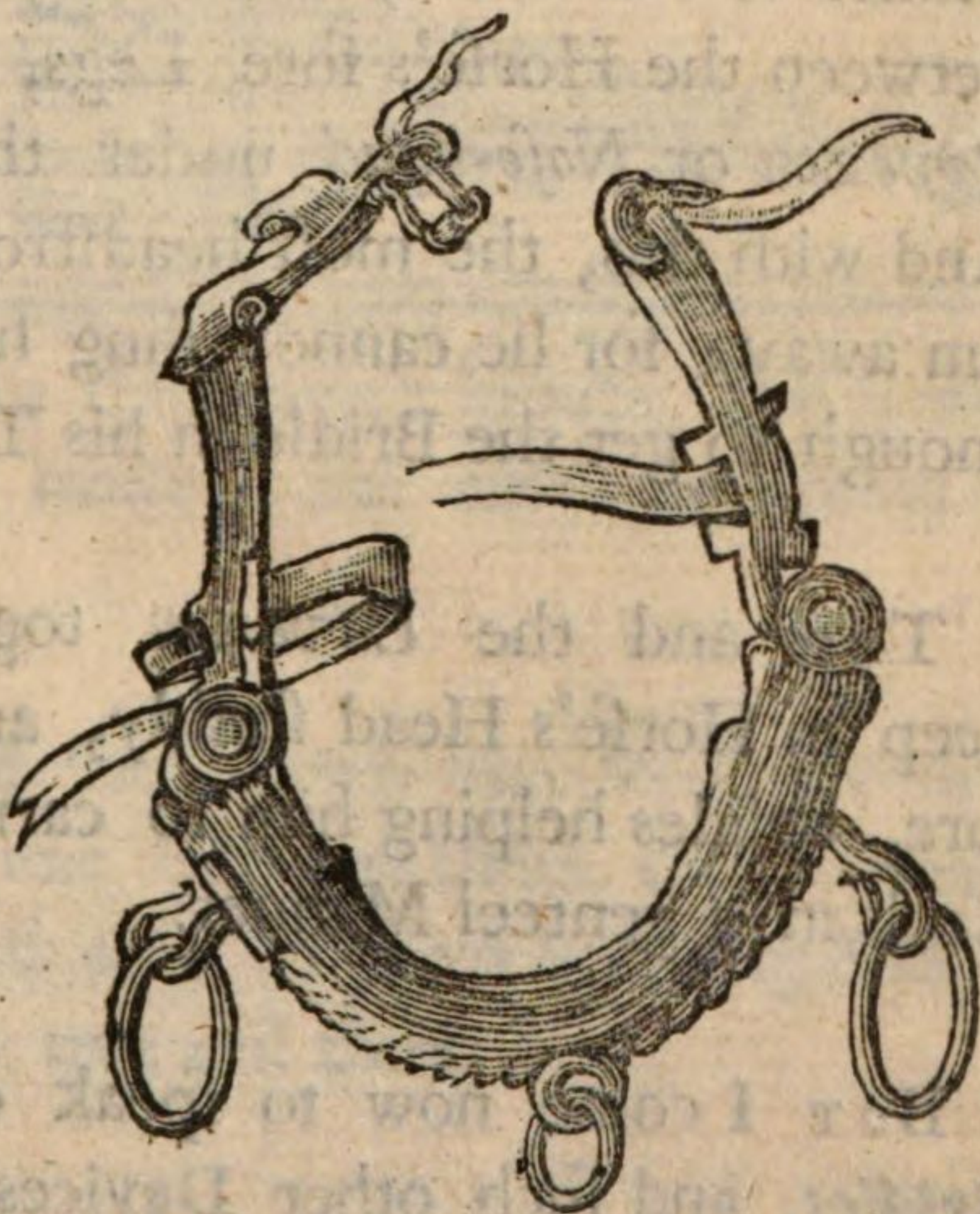
HIS Lordship observes, that at *Antwerp* he broke a Barb with the *Cavezon* only, and even brought him to the Menage by that means, without other Bridle; which shews how much it is necessary to consult Reason, and how far an Artist will outdo the Unskilful.

THE Duke observes, that the famous *Pignatelli* of *Naples*, never used any other than the *Cavezon* or single Bitt in the Breaking and Managing of Horses, which surprized the Riders so much, that they could not desist from asking him the Reason

Reasons why he would attempt that extraordinary Method: his Answer only was, *que c'étoit leur Ignorance & son Art* ; which is as much as to say, that his Art was a Proof of their Ignorance. But we must consider that he was perfectly well skilled in Horsemanship, and he broke or managed no Horses but *Neapolitans*.

THE Duke of *Newcastle*, however, who was acknowledged one of the best Horsemen in the World, by Dint of Reason and good Temper, brought, at length, that Art to such Perfection, that from the most Gentle to the most Stubborn Horse, he contrived such Instruments for their Management, as would bring them to any Action he desired.

THE *Cavezon* of the sharper Sort, which that Noble Lord recommends, is the anext, or a *Cavezon* of three Pieces, but covered with Leather ; and as the Horse comes to be more civilized, may be doubly cased with Leather.



BUT the *Cavezon*, however it is made, (for some will be more disposed to use one Sort than another) must be buckled under the Horse's Chops like the *Nose-band* of a Bridle, with a *Head-stall* joined to it, to go over the Head of the Horse.

IF we use a *Martingale*, which is chiefly designed to correct an Horse from tossing up his Head, or rising up an end; the *Martingale* must have two Buckles, and should be made of strong Leather, to resist any sudden Jerk he may give in his Exercises. This Rein is pretty well known, but the Manner of buckling it is not perhaps so well understood.

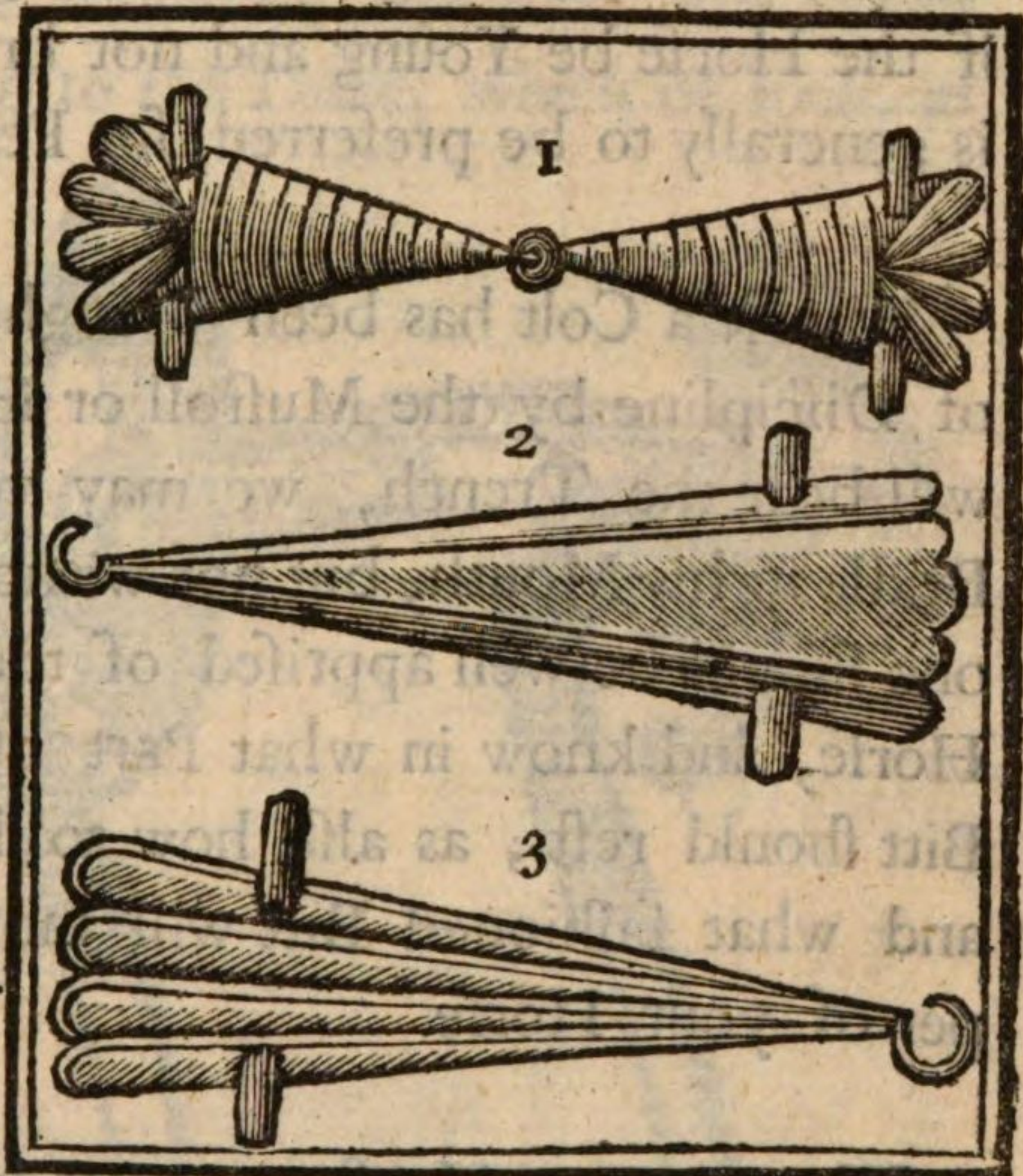
WHEN we use it, we must buckle the shorter Branch to the Girth, and bringing the other End between the Horse's fore Legs, buckle it to the *Cavezon* or *Nose-band* under the Horse's Chops. And with this, the most headstrong Horse cannot run away; for he cannot fling his Head forward enough to get the Bridle in his Teeth.

THIS and the *Cavezon* together, serve to keep an Horse's Head steady, and in a right Posture, besides helping him to carry his Head and Neck in a genteel Manner.

BUT I come now to speak of the *Bitts* and *Bridles*, and such other Devices as are contrived for the Mouthing and Correcting of Horses; and these

these are as various as the Minds of the Riders; and that they should be various is necessary; for some Horses will not be brought to Obedience with the same Ease as others, and therefore I shall give my Reader the Figures and Accounts of the Principal among them.

THE first that we ought to put into his Mouth is the *Trench* anext, having it well fastned with a *Head-stall* and strong Reins, besides the *Musroll*.



THIS Trench should be light, and as small as the least Cannon used in Bridles, and be

fore we put it into the Horse's Mouth, rub it well with Honey, to make it the more agreeable to the Horse.

THE Figure of the Trench here recommended, is N^o 1. But some who yet think that too hard for the Mouth, use only the plain watering Snaffle, as in the Figures two and three.

N^o 2.

N^o 2. represents the Inside of the Snaffle, and N^o 3. the Outside: these two Figures make one Snaffle, when joyned by the Hooks exprest in each.

THIS Snaffle is of good Use in leading out an Horfe, or for riding a well tempered one; but if the Horfe be Young and not broke, the Trench is generally to be preferred, for Fear of Danger.

WHEN a Colt has been brought to some Share of Discipline by the Musroll or Head-strain, and will bear the Trench, we may venture to put a Bridle in his Mouth, but not without Caution; for one should be well apprised of the Nature of the Horfe, and know in what Part of the Mouth the Bitt should rest; as also how to hold the Reins, and what fashioned Bitt will most suite the Temper of your Horfe.

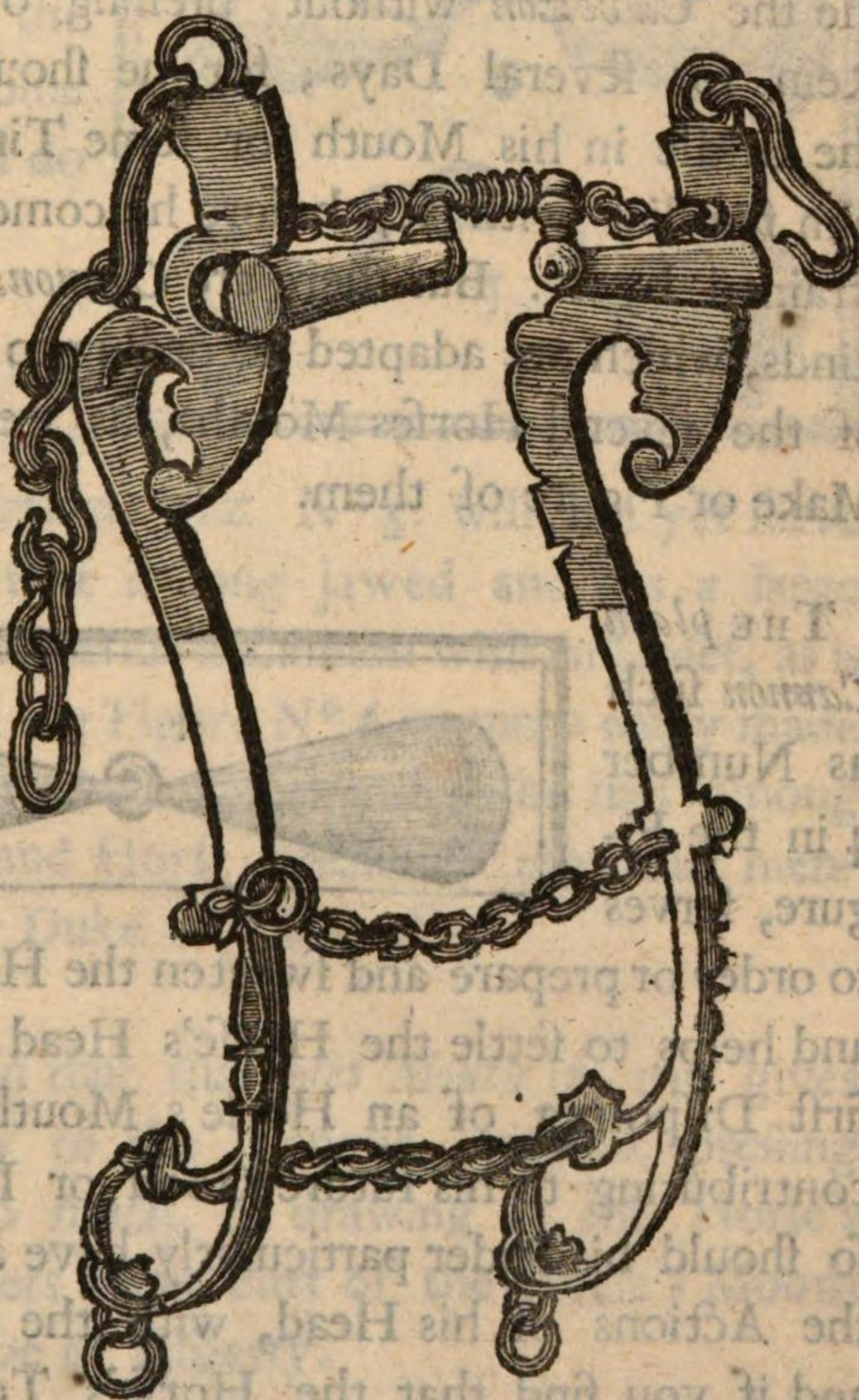
WHEN your Horfe can trot well, both upon even and in rugged Ways, and is brought to turn easily on any Hand, by the Means formerly proposed; you may then venture to put the Bitt into his Mouth.

THE first Bitt you put into a young Horfe's Mouth, should be one that has been often used, and at the time we use it with the Colt, it should be well rubbed with Honey, or as some would have

have it with Honey and Salt ; but Honey alone is sufficient.

THIS Bitt ought to rest upon the Gumms near the Tusshes of the Horfe, in such a manner, that his Tongue may not get over it ; for it frets an Horfe if his Tongue gets over the Bitt ; for which reason, if an Horfe has a long Mouth, it is necessary to use the following Bitt with the upsett Mouth, according to the Duke, which he took, as his Grace

owns, from the famous *Pignatelli* of Naples ; and therefore calls the Bitt a *plain Cannon* after *Pignatelli's* Manner ; the cheeks of the Bitt he directs as represented in the Figure.

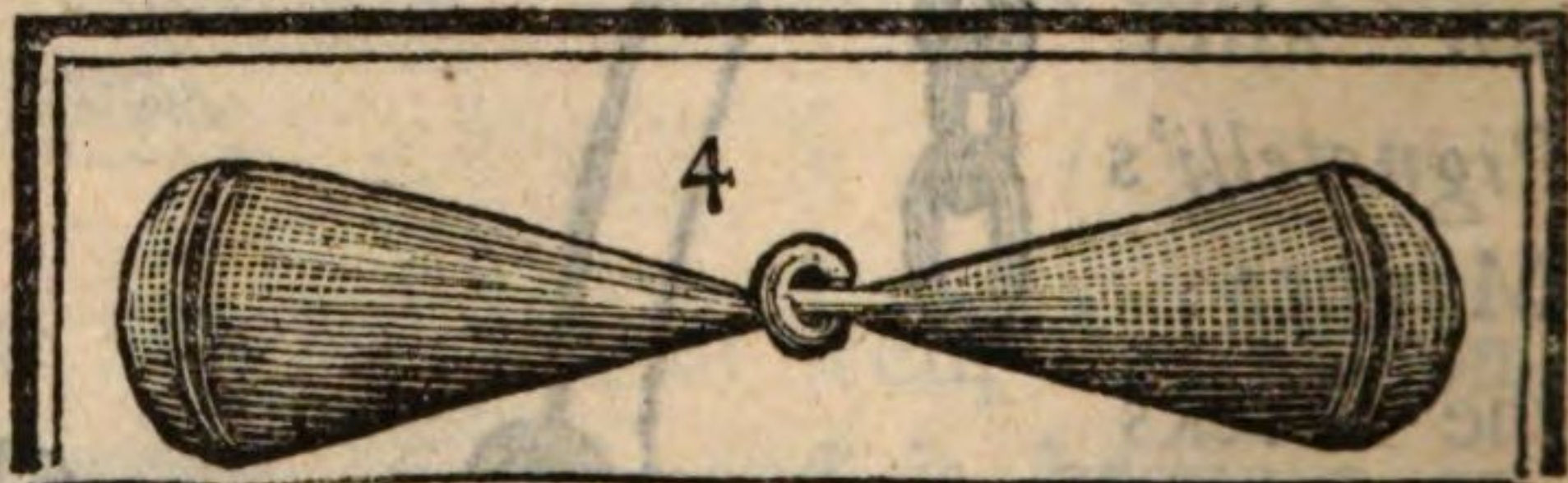


BUT if an Horfe is short headed or short mouthed, then only a plain

plain Cannon may be used without the upset Mouth, which by a Figure will be represented at N^o 4.

The Duke (whose Practice at this Day is in great esteem) recommends to lett the *Kirb* or *Curb* remain unhookt for three or four Days after the first putting the Bitt into the Horſe's Mouth, and then to hook the *Kirb*, ſo as to be free rather than preſs his Mouth; but with this, we ſhould alſo uſe the *Cavezon* without preſſing of the Bridle Rein for ſeveral Days; for he ſhould only feel the Bridle in his Mouth for ſome Time, to make him familiar with it, before he comes to be reſtrained by it: But there are *Cannons* of various kinds, which are adapted according to the Temper of the ſeveral Horſes Mouths, as well as to the Make or Figure of them.

THE *plain Cannon* ſuch as Number 4 in the Figure, ſerves

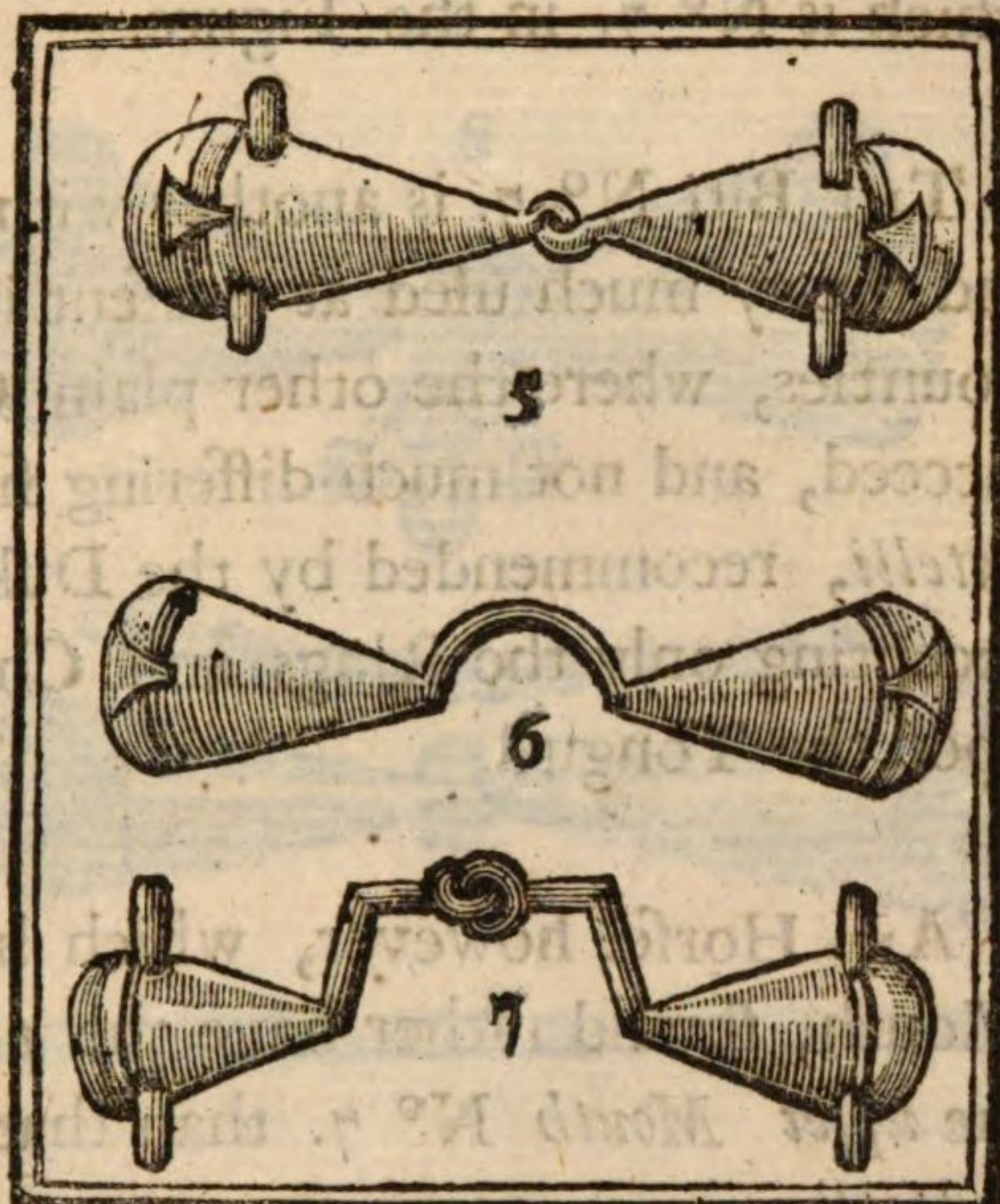


to order or prepare and ſweeten the Horſe's Mouth, and helps to ſettle the Horſe's Head; and as the firſt Diſpoſing of an Horſe's Mouth, is chiefly contributing to his future Good or Ill behaviour, ſo ſhould his Rider particularly have a Regard of the Actions of his Head, with the firſt Bridle; and if you find that the Horſe's Tongue is over large for this plain *Cannon*, or that it preſs too hard,

as

as you may discover by his Gaping and Twisting of his Mouth, or pushing out his Tongue. Then either use the Duke's before mentioned, or that in the Plate N^o 5.

but this has an Advantage before the N^o 4. because it does not press the Tongue so much as that, and therefore in the breaking of some Horses it will do better.



MONSIEUR
Le Brove, when the former *Cannon*, viz. N^o 5. will not yet serve for an Horse that is long jawed and has a large Tongue, recommends a Cannon with an Upset, as is represented in the Figure N^o 6. as more easily made in the Country, and may therefore be had among the Farmers and Horse breakers, than that mentioned by the Duke of *Newcastle*,

It is certain that the *upset Mouth* in this gives great Liberty to the Tongue, without pressing the Gums too much, or drawing in the Horse's Lips, but suffers every Part of the Horse's Mouth to play and be at Liberty.

THIS as well as the former Bitts, should be always used with the *Cavezon*, as also the next, which is N^o 7. in the Figure.

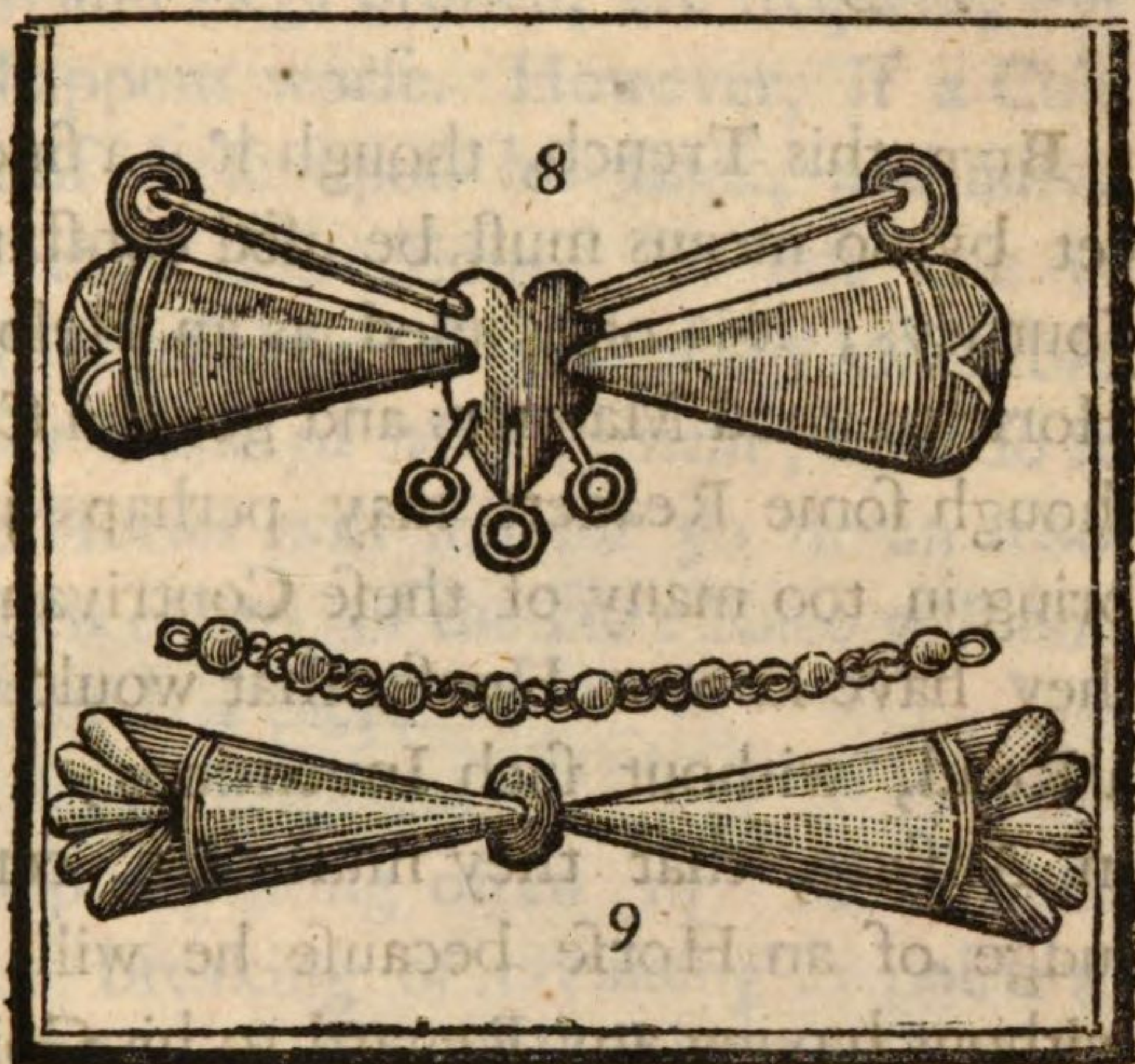
THE Bitt N^o 7. is another with an *upset Mouth*, and pretty much used at present in several *English* Counties, where the other plain Cannons will not succeed, and not much differing from that of *Pignatelli*, recommended by the Duke of *Newcastle*, excepting only the Rings and Chain, which play upon the Tongue.

AN Horfe, however, which has a Natural soft Mouth, should rather have the *plain Cannon* with the *upset Mouth* N^o 7. than that of Signior *Pignatelli*.

I next am to Speak of such Bitts which we may use when the *Cavezon* has done its Duty, and may be layed aside.

THAT

THAT which is most commended is the Cannon with the flying Trench, for it greatly corrects the Horse's Mouth and regulates his Head in a familiar Way, without the *Cavezon*.



THIS flying Trench must be made in all Proportions like our common *Snaffle*, but with a Ring at each End, to which must be fastened the false Reins.

WHEN you use this, let your false Rein on the left side lye over the bridle Rein, and gather the right side *false Rein* even with it, to be at the Command of your right Hand, and when you are disposed to let your Horse feel his Bitt and Kirb, raise your Hand towards the Saddle; and to ease him again of any trouble the Bitt may give him, let your Hand sink to the Withers of the Horse; for in the raising your Hand you draw up the Reins of the Bitt, and at the same Time loose the false Reins; as well as the loosening the

Reins of the Bitt, draws up the false Reins :
From whence one may conceive the Advantage of
this flying Trench.

BUT this Trench, though it is a fine Corrector, yet by no means must be used constantly or upon Journeys ; it is only used as an Help to bring an Horse to good Manners and genteel Carriage ; and though some Readers may perhaps judge that I bring in too many of these Contrivances, because they have known Horses that would drudge upon a Road, without such Inventions ; I only return in Answer, that they must then, certainly, only judge of an Horse because he will carry them ; without having any Regard to his Going and good Temper, which are the Excellencies that chiefly render a Horse valuable. For let an Horse be never so good in Nature, if he is hard mouthed, or is subject to Start, and carries himself awkwardly, the well trained Horse, though he has not the natural Perfections, will sell for more in the Markets than the clumsy Horse.

BUT to proceed a little farther, with regard to Bitts, for I have many more to recommend, to prevent (if I can) the Spoiling of Colts or young Horses for the future in their Breaking, for then is the Time to make them useful, and bring them to our purpose ; a rude unskillfull Hand will never do it. A Clown, because he can wrastle or play well at Cudgells, will perhaps, venture the first Backing of an Horse, because he can lay on great
Blows,

Blows, and has little Regard for himself; but I have seen several Mischiefs happen from such Attempts: Arms and Legs broken, are frequent, but too often it happens worse. However, if a Colt will take one of these upon his Back, and move forward by their Directions, 'tis not one in 500, that proves slightly or makes any tollerable Appearance for Want of Management; and so it is, that some Horses will sell for 50 or an 100 Guinea's, when others of the same Race will not sell for Five Pounds a piece.

I cannot help repeating often my Sentiments concerning the breaking or civilizing so noble a Creature as an Horse, that every Colt may have proper Education; and to shew, likewise, how Gentleness ought to be used on that Occasion; and how much the Temper of every Creature ought to be considered, when we undertake to improve it from natural Wildness; which leads me more particularly to recommend the next Mouth-piece, which is the *plain Scatch* N^o 9. in the above Plate, which, after the Cannon is left off, (provided the Horse has a gentle Mouth, and is sensible of the Use of the Cannon) let it follow the Use of the foregoing.

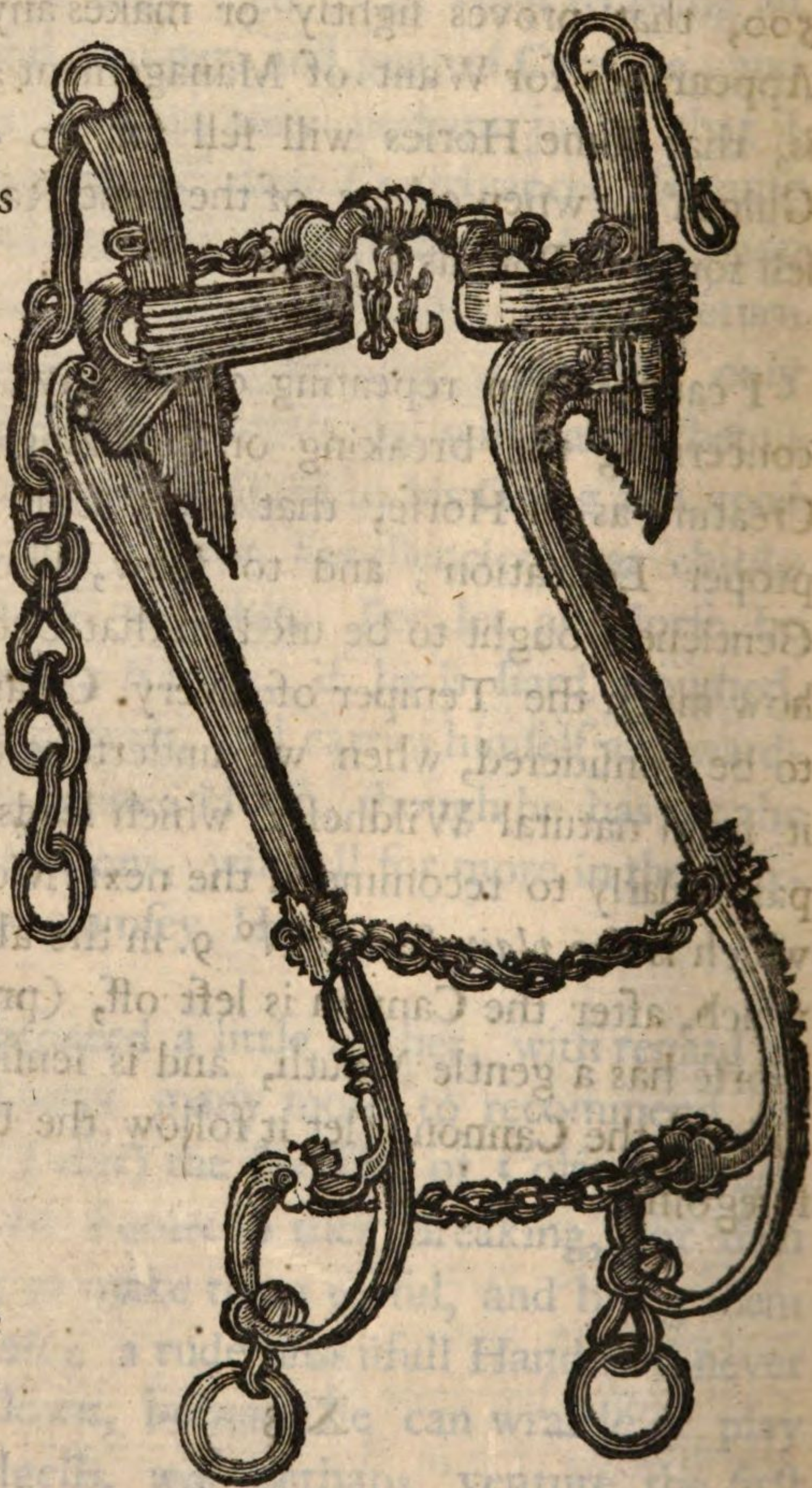
X 3

The

The Melon or Olive Bitt.

THE Duke of Newcastle and Seignior Pignatelli, after the Use of the Cannon recommend the Scatch with an upset Mouth, as represented in the Figure adjoining.

This his Grace gives us under the Title of *Pignatelli's Scatch*, & applies to it the same Checks or little differing from those he recommends in his other Bitts, which he calls *Branches à la Conétable*. It serves more particularly to command the Tongue than the foregoing.

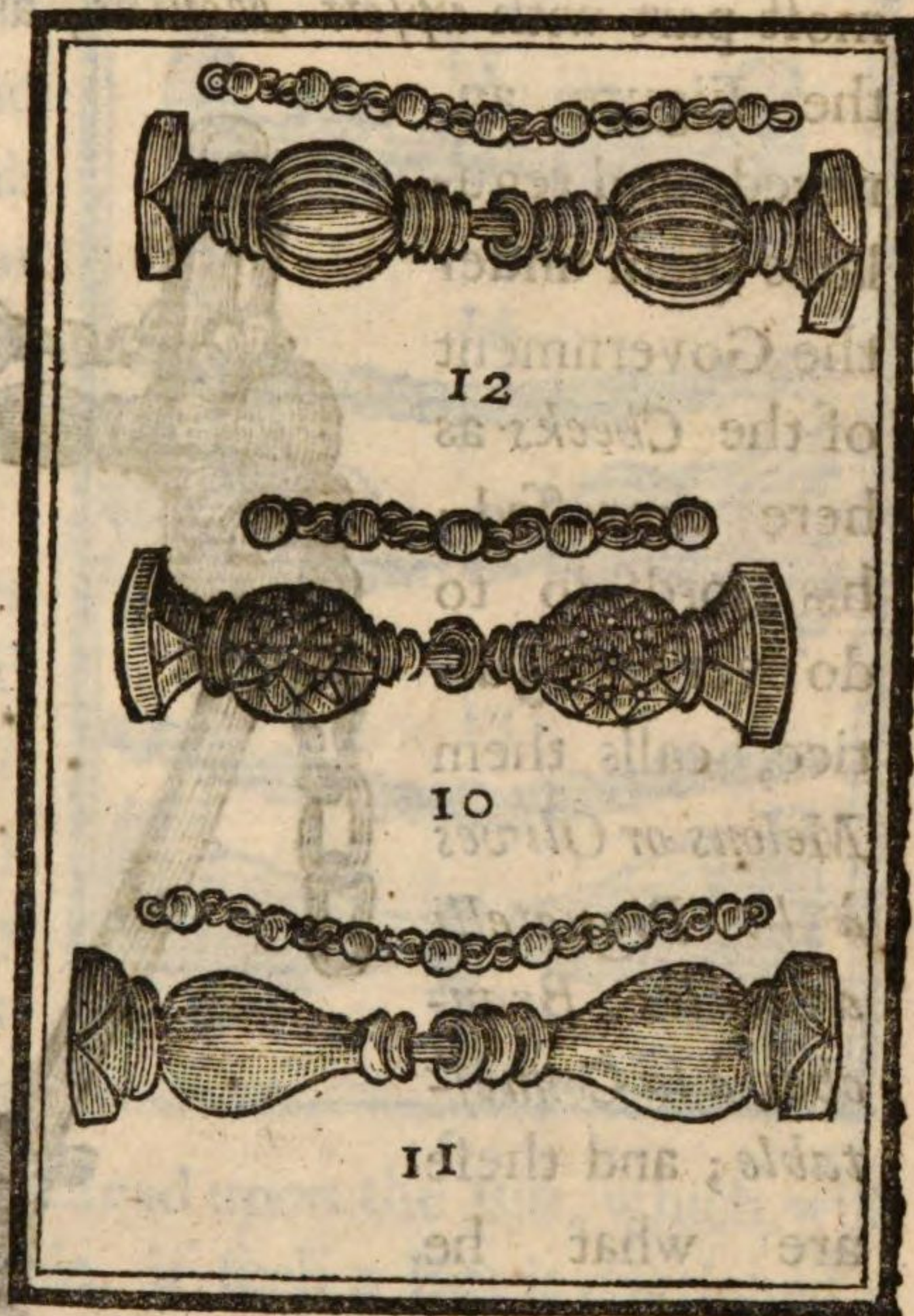


SOME Horsemen of Reputation, in Consideration that Horses Mouths are sometimes very shallow and small, instead of the *Scatch*, recommend the Bitt called the *Olive* or *Melon*, with a watering Chain above. This Bitt is so called from the Figure which is represented N^o 10. these Melons or Olives, ought to be verry smooth with holes in them, which will the better please the Horse, as it will occasion him to champ upon the Bitt.

BUT if the Horse draw in his Lip, or endeavour to de-

fend his Gums from the Bitt, or put his Tongue out of his Mouth, then the *pear Bitt* N^o 11. is preferable with a watering Chain above it, and this he will be apt to do if his *Barrs* are Tender

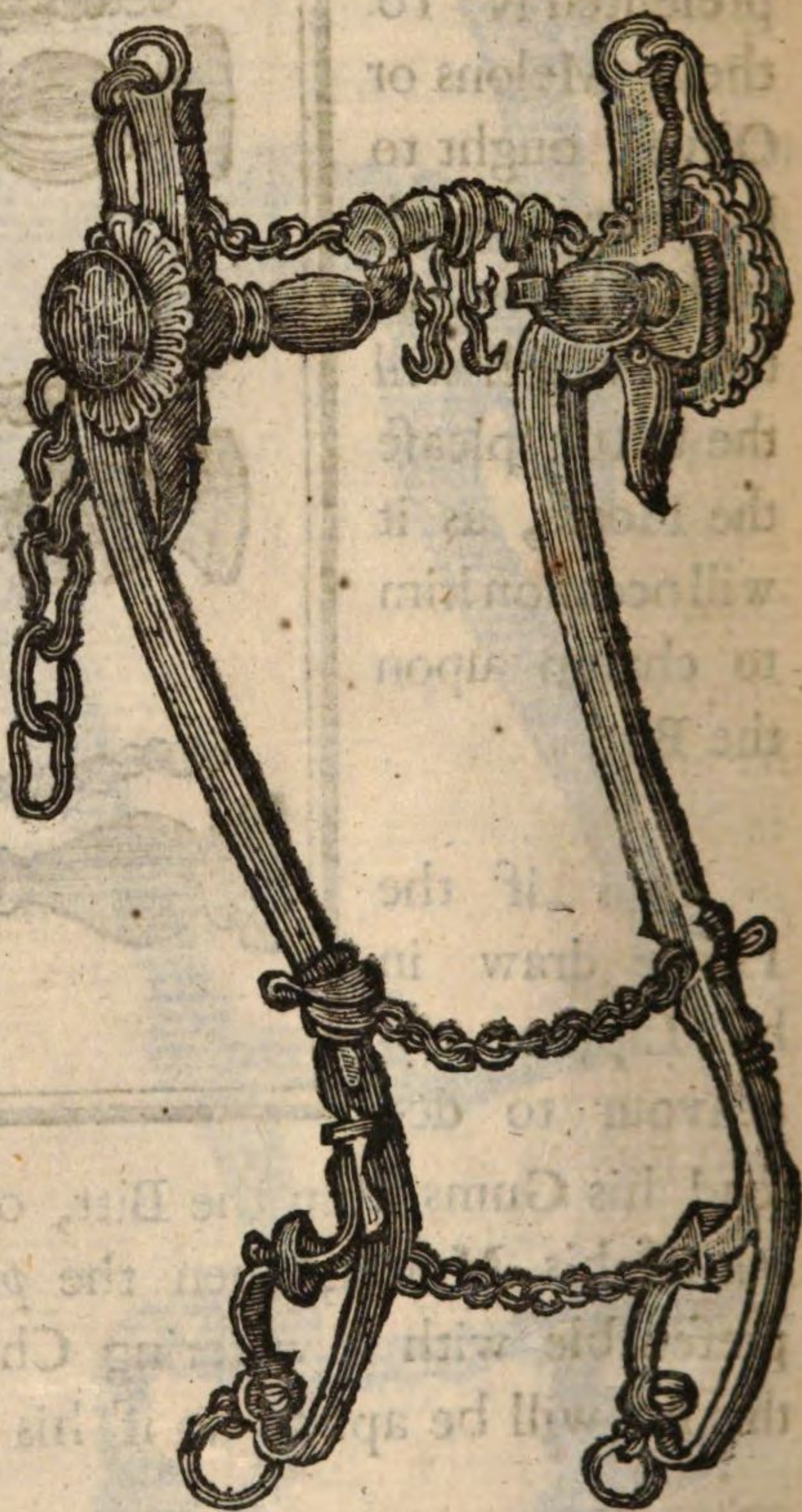
It is also necessary if we observe that an Horse champs or sucks too much upon the *Melon Bitt*, to exchange that for the *Poppy Bitt* N^o 12, which is without Holes. It is called a *Poppy Bitt* only



from its Figure, which is like a Poppy Head where the Seeds grow.

SEIGNIOR *Pignatelli* invented these Bitts, and the famous Duke of *Newcastle* improved greatly upon them; His Grace chuses them for the most part with *upsett Mouths*, as you may see in the Figure an-

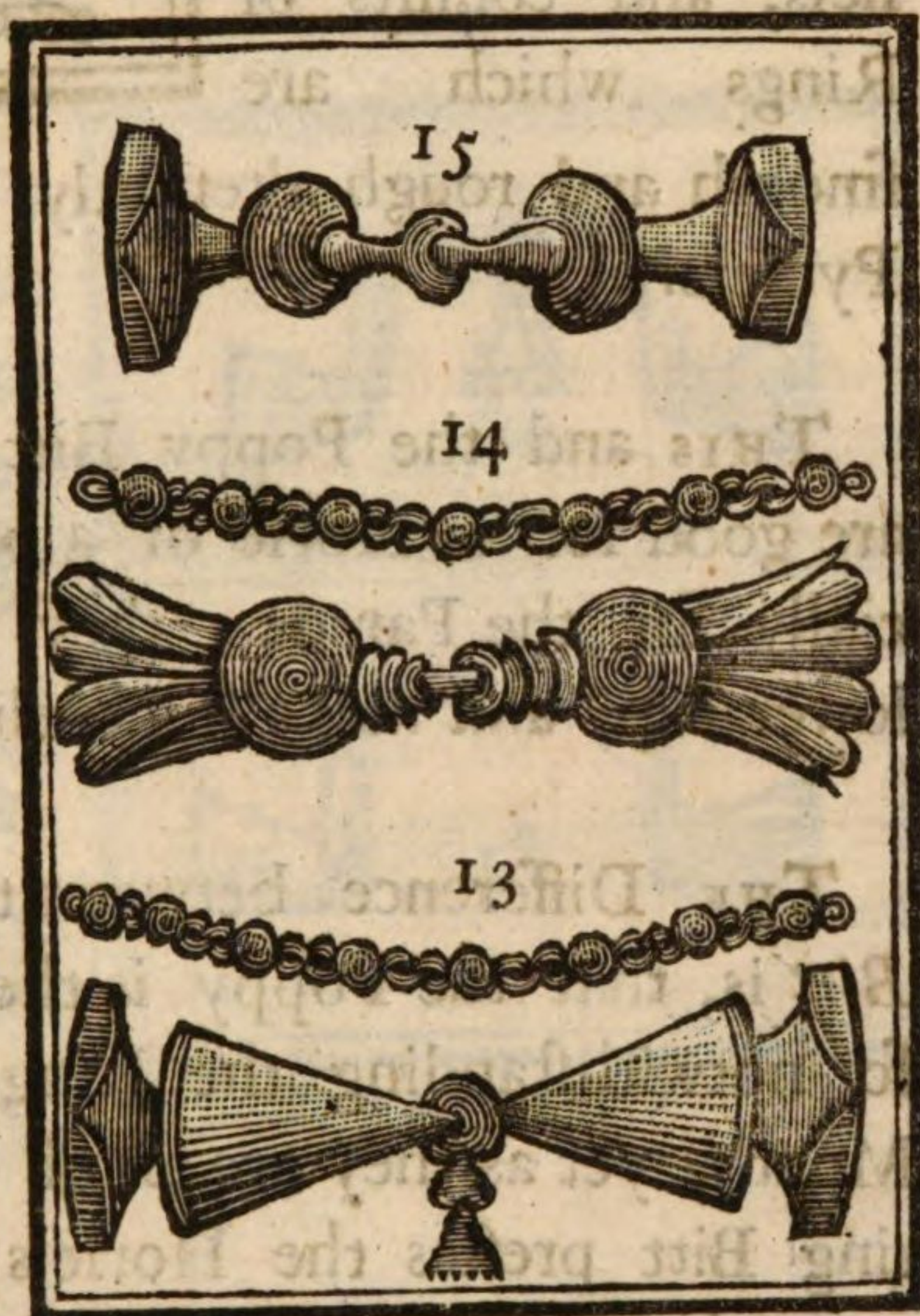
nexed, and regulates them under the Government of the *Cheeks* as here expressed; his Lordship to do every one Justice, calls them *Melons or Olives à la Pignatelli avec les Branches à la Connestable*; and these are what he thinks fit to inform us of Bitts, being what he used with great Success in breaking all his fine



Horses, as well as his favourite Captain *Mazine*, who was bred up by him, and had the Praises of every one that knew his Dexterity.

IF your Horse draw up his Tongue, or his *Barrs* are hard, and he has a large Mouth, or attempts to defend himself with his lower Lip, then use the Campanell or Bell Bitt, marked N^o 13. in the plate annext; which Bitt should be round and imboft; but if his Mouth be small or streight, this Bitt should be flatt.

BUT sometimes Horses love to rest upon their Bitts, especially if they have got hard dry Mouths, and then he will lay the



whole weight of his Head upon the Bitt, which will bring him to stumble, if such a Bitt is continued; therefore as soon as you find that, change the Campanell for the *Scatch* or *Chace* Bitt, with turning Roles as exprest in Figure 14.

SOME of the tyrannical Riders use the Bitt called the Bastonet N^o 15. instead of the foregoing *Scatch*; but that is barbarous, and I can never agree with any Thing of that Kind; however my Reader should know the whole of the Matter, and therefore I give him a View of it.

THE next is what we call the ring Bitt, as represented under N^o 16. in the Figure; it is all of an equal bigness, and consists of Rings which are smooth and rough alternatly, intermixed with small Pyalers.



THIS and the Poppy Bitt before mentioned, are good for an Horfe of a perfect Mouth, especially for the Parade; they give Motion to his lower Lip, and make him delight in his Kirb.

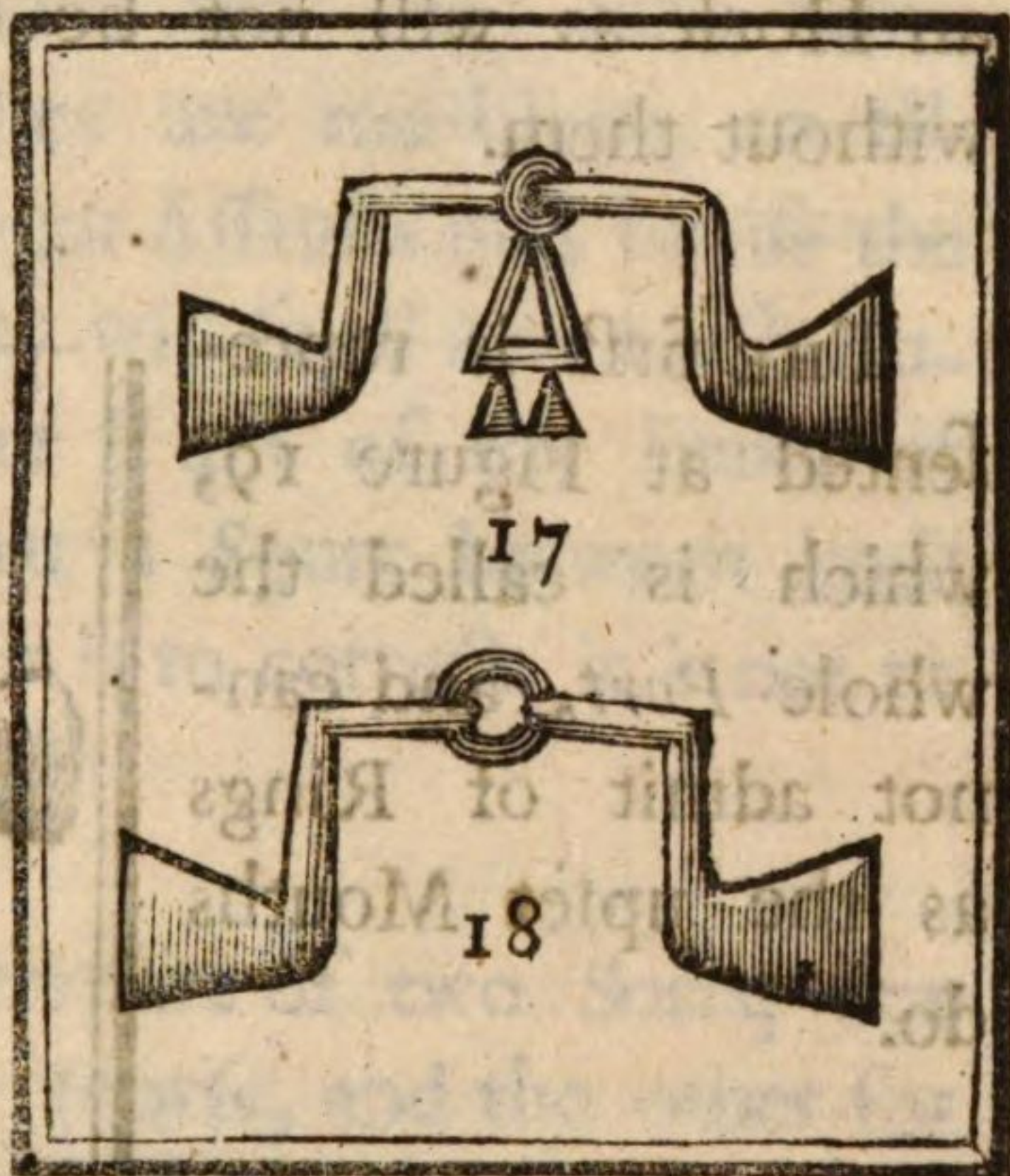
THE Difference between the *Poppy* and *Ring Bitt* is, that the *Poppy* is the softer of the two, for notwithstanding the Rings *play* in the Horfes Mouth, yet as they are all of one Dimension, the ring Bitt presses the Horfe's Mouth and Gums more than the *Poppy Bitt*; however as the Reins turn about, they are the easier to him.

Either of these Bitts are of good Use in bringing of Horfes to the Pace or Amble, or in other Terms to make *Padds* of them.

THERE

THERE are no other *Bitts* or *Mouths* for *Horses* that I know of; but as I have mentioned *upset Mouths* in *Bitts*, it will be necessary to explain particularly what they are.

N^o 17. is what we call the *upset Mouth*, but that is now regulated and brought lower according to the *Direction* of the *Rider*.



THOSE of the *Duke of Newcastle's* above, are ringed and softened, and are now in the greatest *Use*.

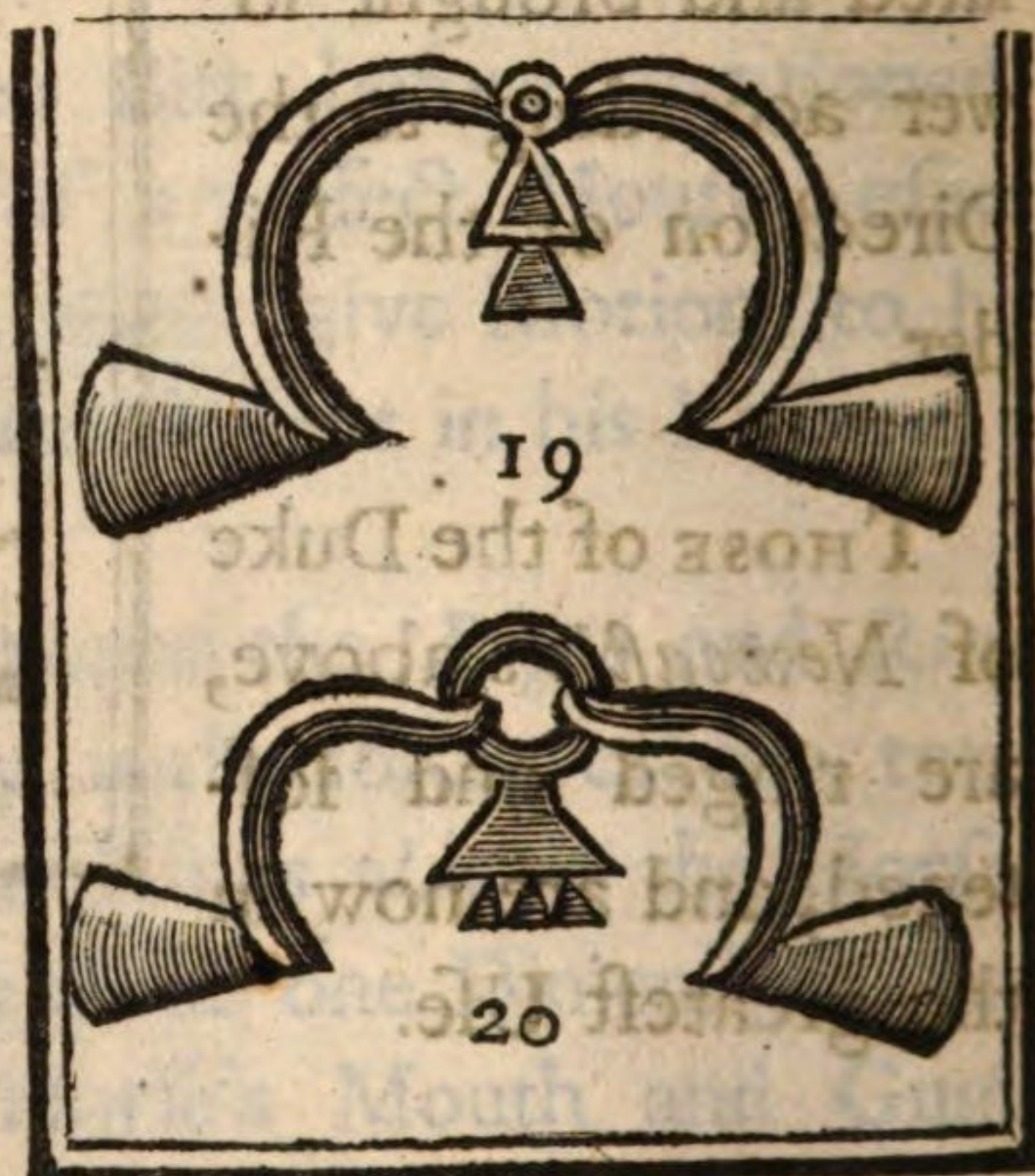
N^o 18. in the *Plate*, shews the *Figure* of an *upset Mouth* and *Trench*; some *Horses* *Mouths* are made to bear with it higher than others; but if it be made too high, it will fret the *Horse's* *Palate*, so that every *Bridle* will not serve every *Horse*.

I HAVE known only an extraordinary *Bridle* make an *Horse* fling his *Rider*, or do mischief to himself.

AFTER

AFTER the *upset Mouths*, I cannot help observing that there have been, and are yet used, what they call *Ports*, which are a Sort of *Upsets*, but must certainly make an Horse very uneasy in his Mouth, and ought never to be used but with such an Horse as will not be brought to Obedience without them.

THE first is represented at Figure 19, which is called the whole *Port*, and cannot admit of Rings as the *upset Mouths* do.



N^o 20. is called the *broken Port* or *half Port*, which injures

the Horse's Tongue extreamly, and wounds his Palate, but sometimes these must be used, as some would have it.

I have now mentioned what is necessary concerning the Education of the Horse from the Foaling to the Saddle, except the Spurrs, which if they are placed at the Heel of an indiscreet Person may undoe all that we have been writing about.

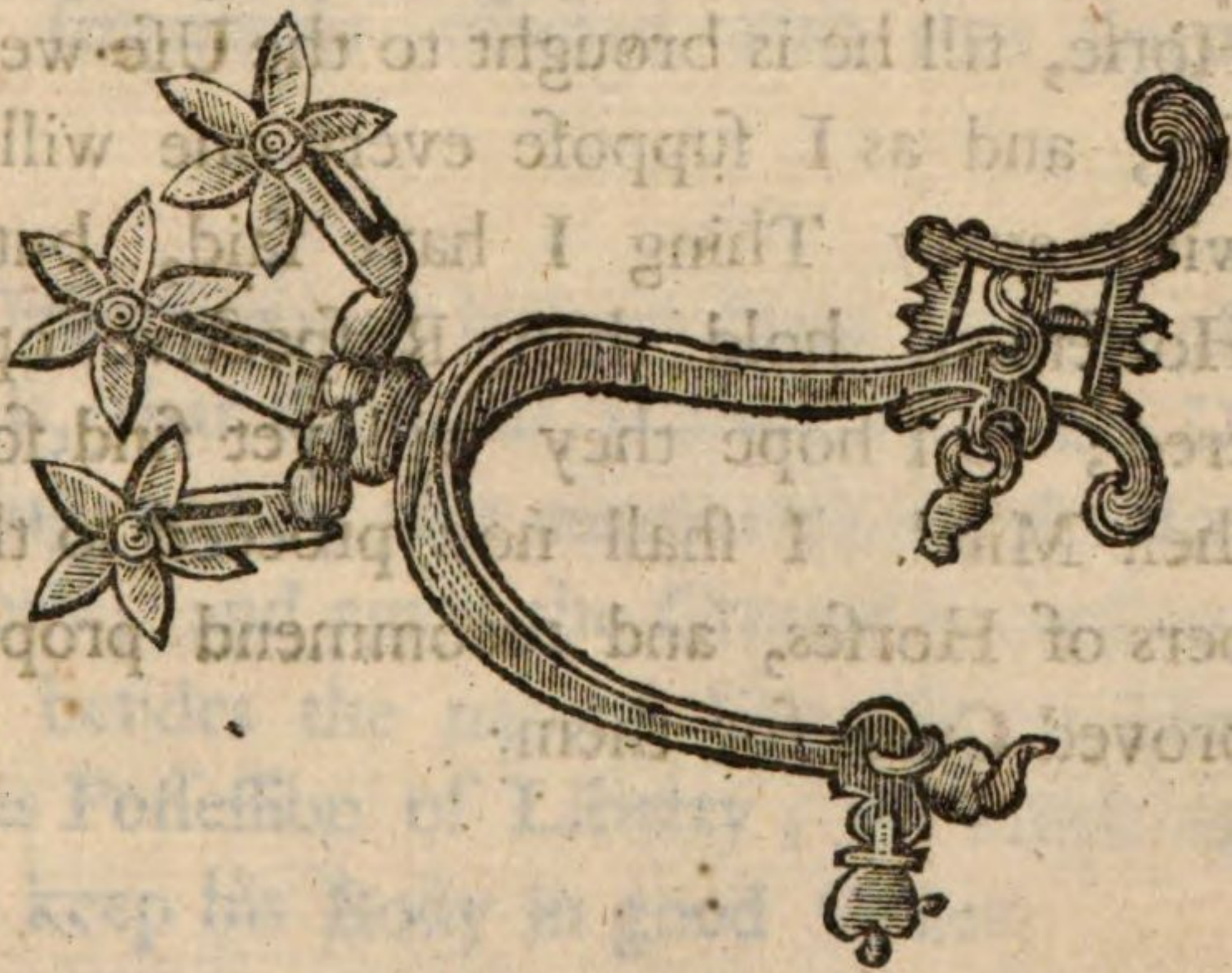
A Passionate Man never ought to wear a Spurr, nor an indiscreet Smith make any.

A Spurr

A *Spurr*, if the Points of the Rowels are too sharp or too blunt, may do equal Mischief, especially if an ignorant Horseman wears them; for if they are too sharp and fine at the Points, the Points will frequently break in the Sides of the Horse, and occasion Ulcers that may take some Time to Cure; and if they are too blunt, an Ill-natured Heel with frequent Assaults may bruise the Sides so much, that they will swell and cause Impostumations. Therefore I am of the Duke of Newcastle's Opinion, that a Spurr between both is the best; for though it is to correct, it is not to do Mischief.

His Lordship's Spurrs are of two Sorts, one for the Manage or great Horse, and the other for an indifferent Spurr; the first Sort he makes with three Ro-

wells, as may be seen in the Figure annexed, with the Rowels so disposed that they cannot ripp an Horse's



Sides, to his Disadvantage; besides the Rowels are

are too strong to break at the Points, and too sharp to bruise without Wounding.

His single Spurr is of the Manner of the Figure here adjoined, and upon the same Principles as the other; and I am persuaded if



Gentlemen would have more Regard to Spurs, as I have mentioned above, a Horse would be seldom under a long Cure for the Spurr Gall, which is now too common.

THIS is what I have to say concerning the Horse, till he is brought to the Use we design him for; and as I suppose every one will not agree with every Thing I have said, but like true Horsemen, hold their Respective opinions Sacred; so I hope they will yet find something to their Mind. I shall now proceed to the Distempers of Horses, and recommend proper and approved Cures for them.

S E C T.

S E C T. III.

Of the Distempers of Horses and their Cure.

AS I have now done with the Breeding and Training of Horses to be of Service in the Saddle, I am next to present the proper Measures to preserve their Health.

As the common Ways of keeping Horses are two, *viz.* at Grass or in the Stable; so I beg Leave to make the following Remarks upon them, in these several Ways.

AN Horse at Grass, is seldom if ever troubled with *thick Heels*, while an Horse kept in the Stable, is frequently afflicted with that Inconvenience.

THIS Difference may happen from three Causes. The first is, that the Grass is always in some Degree purging, and by that means cleanses the Body of the Horse; and again the Ground is cooling to the Feet, besides the natural Exercise an Horse takes in his Possession of Liberty; all which contribute to keep his Body in good Order.

ON the contrary, an Horse in the Stable is, we suppose, high fed, is seldom used but in a violent

violent Manner in Hunting, &c. and has by that means the Opportunity of taking Cold after hard Chaces; and if he stand long without Exercise, the gross Humours fall into his Heels, and are very hard to remove.

A Medium is now practised by all the Skillfull, between the Stable and the Pasture, to prevent Distempers, especially those who delight in Hunting. Which is to build a Hovel or small open House at the corner of some Field where you design to let your Horses run, and in that House to have always good Provender.

WHEN the Horses suffer with Cold, they will come to the House; and especially when the Grass purges too much, they will apply themselves to hard Meat.

HORSES treated in this Manner, will last much longer, and be of better Service than those kept either in the House or entirely on the Pasture, and be free from Distempers; these, indeed, will not look so Sleek as those of the Stable, but one of these will do twice the Service of a stabled Horse.

NOTE this however, When an Horse used to this Way, is brought home from hard Exercise, put him for that Night into the Stable, with the usual Ceremonies of Rubbing, Dressing, &c. and turn him out the next Morning; for if you put him

him out the same Night, it is very likely to kill him, as I have known several Times to fall out, for want of this Caution.

WHAT I have said will be enough to a wise Man in this Case ; and I shall therefore go on to prescribe such Receipts as I have met with, of the most Use for the Curing the several Distempers, which Horses are Subject to.

AND first of the Mash, which is made either with Brann or Malt, but the Malt Mash is accounted the strongest, though the Brann Mash is more frequently used ; they are both made alike, and so I shall only mention the Malt Sort, *viz.*

TAKE a Peck of ground Malt, and put it into a Pail ; pour on this a Gallon and a Half of Water boiling hot, mash and stir them together, till the Water is sweet ; then let it stand till it be Milk warm, and then give it the Horse ; this is good after any Horse has had hard Labour, especially to such as are weak or lean, for it carries off ill Humours, comforts the Spirits, and helps the Body.

A Purge for Hunting Horses, from Mr. John Masterman.

TAKE Oil-Olive or Sallet-Oil ; half a Pint, of new Milk, a Pint ; brew them together, and give them the Horse with a Horn. This Purge is much

Y

stronger

stronger than any of the former, and will in the Working, make a Horse Sick, for an Hour or so; it also purges the Stomach and Bowels of all cooled Grease or other Humours, which hard Labour has occasioned; it is best for a fatt Horse, especially when, after you have given him cordial Medicines, you find that his Constitution was not hepled by them, or by former Drenches.

As soon as you have given this Purge, ride your Horse gently up and down for half an Hour, and then put him in the Stall, so as he may lye down at his Pleasure; the Time to give this, is in the Morning.

A Drench for a Cold in Horses.

TAKE half an Ounce of the Powder called Diapente, and mix it well with a Pint of strong white Wine or Canary, or for Want of either, with old strong Beer; but the Wines are the best if they can be had pure, which is a Difficulty; and give it the Horse fasting in the Morning.

GIVE him this to drink as soon as you see him begin to droop, and so continue for three or four Mornings successively.

Another Drench for the same.

TAKE two Handfulls of Celandine Root and Leaves, chop them and bruise them; then take
of

of Rue and red Sage, of each a Handfull; add to these of the Aloe Hepatica half an Ounce; boil these Ingredients in two Quarts of Ale free from the Yeast, till the Liquor is reduced to half the Quantity, and give it the Horse Milk warm.

Another Receipt for the same.

TAKE four Ounces of Diapente and mix it with as much clarified Honey; and when you use it, put half an Ounce of the Mixture into a Pint of warm Ale Wort, and give it the Horse warm.

A Drench for a Cold.

TAKE Liquorish, an Ounce; Anniseeds, Cummin-seeds and Elecampane Roots, of each half an Ounce; Turmerick and Bay Leaves, of each a Quarter of an Ounce; long Pepper and Fenugreek-Seed, of each two Drams; let these be finely pulverised, and put five common Spoonfuls into a Quart of Ale warmed, with a little Butter for a Dose.

THIS is a very good Medicine, but keep the Horse warm.

A comfortable Purging Drench.

TAKE a Pint of strong White Wine or Canary, or if you cannot meet with them good, which is

a Query, use the like Quantity of old strong Beer; to this put half a Pint of Sallet-Oil, and mix them well together over the Fire, and give them to the Horfe. This Purge has all the Vertues as that of Sallet-Oil and Milk, but excells in this, that it is much more comfortable. This is good either for a Horfe full in Flesh, or a lean one.

If the Horfe be lean, and has any gross Humour to Work upon, this is proper to be given to him.

He must be ridden as usual in Purges, and at his first taking from Grafs, after he has received his first sound Sweat, it will purge his Bowels. Give this early in the Morning, and his Exercise to be gentle half an Hour after it.

*A Drench for an Horfe that has a Megrim,
from Mr. M. M.*

TAKE of the Tops of Rosemary, about three Ounces, and Chop them small; then take a Quarter of a Pound of sweet Butter, and work them with it; then break it in Pieces, and roll it into several Balls as big as Wall-nutts.

THEN holding up the Horfe's Head, put them gently down his Throat, and ride the Horfe easily, about half an Hour, to make the Medicine work. This is good for a Horfe in Flesh,

AFTER

AFTER you have given him a gentle Sweat, the Balls will clear his Stomach and Bowels, and at the same time help the Head.

THIS must be given to the Horse early in the Morning fasting.

For a broken Winded Horse, or for a Cold.

TAKE twenty Cloves of Garlick clean peeled, bruise them in a wooden Dish; then take a Quarter of a Pound of fresh Butter, and roll the Garlick and Butter together into four or five Balls as big as Wall-nutts, and give them the Horse. This Medicine is to be given to any Horse of what State of Body soever, if he be subject either to Cold or Pose in the Head; for it purges the Head and Lungs. The Time to give it is in the Morning fasting, and ride him moderately half an Hour after: You may if you please give it three Mornings successively.

A Medicine for an Horse that has Breakings-out, or is troubled with Worms.

TAKE a Handful of Box Leaves, dry them and beat them to Powder; then take the same Quantity of Flower of Sulfur, and mix it with the Powder of Box Leaves.

WHEN your Horſe comes in from Hunting or hard Labour, after he is rubbed well and dreſt, and hath ſtood upon the Bridle a good Space, the firſt Meat that you give him, muſt be a Handfull or two of well ſifted Oats, and a pretty large Quantity of this Powder ſprinkled amongſt them.

BUT this muſt be done ſo carefully, that your Horſe may not diſtaſte his Meat on that Account.

THIS Preparation will purge his Head, Stomach, and every Part of the Body. It will deſtroy Worms, Botts, and other Inſects that torment him, eſpecially if he be an hunting or running Horſe.

To take off a Film from the Eyes ; from Mr. A. Winne of Glamorganſhire.

TAKE of Alabaſter-ſtone finely pulveriſed, mix this with white Sugar-Candy, beaten to the fineſt Powder ; blow a little of this Powder through a Quill once or twice a Day into his Eye, and it will be ſucceſſful.

To take off a Film, which is vulgarly called a Pinn or Webb.

TAKE white Copperas pulveriſed, and white Sugar Candy in fine Powder, mix them well together, and blow a little of the Powder into the Horſe's Eye every Day, through a large Goofe-quill,

quill, till the Eye is well; two or three Days Use of this, is enough, or four at most, to perform the Cure.

For a dry Cough.

TAKE three Ounces of rusty Bacon, two Ounces of Tarr, one Ounce and half of Honey, and half an Ounce of the Flower of Brimstone, with a sufficient Quantity of wheat Flower; work them all together into a Mass, and give your Horse a Ball or two of it, for three Mornings successively fasting, letting him repose two or three Days.

For a Spavin.

TAKE Oil of Vitriol, and dip a Feather into it; then touch the Place with it, and it will eat it away: If you find it eat too much, you may stop its Influence by bathing it with cold Water. You may also wash the Sore with it, and it will not only cleanse the Wound from any Piece of the remaining Splint, but will also heal it.

To stop excessive Bleeding.

IN this Case, I can recommend nothing better than a Styptick Water, which is prepared by Mr. Pingo, Chymist, in New-Street Shoe-Lane, which I have often tryed, and it has answered successfully. In one particular Case, I tryed it on a Kind of *Hermaphrodite*, i. e. neither a perfect Horse nor per-

fect Mare, which was shewn as a Curiosity in *King-street* near *Golden Square*, which Creature in a fall had cutt an Artery.

For a fresh Wound, an immediate and certain Remedy.

As soon as a Horse has received a Wound, apply Oil of Turpentine, and it will prevent all evil Consequences; but if that Oil is not to be had, wash the Part with warm Water and Brandy, or with any Spirits and warm Water.

Of the Strangury or Stoppage of Urine, i. e. when an Horse cannot stale.

TAKE Anniseeds pounded, half an Ounce; Parsley Roots, one Handful; or for want of them, Parsley Seeds, half an Ounce pounded; boil these in a Quart of strong white Wine, or for Want of that, as much old strong Beer; then strain it off, and add a Dram of fine Oyster-shell Powder and give it the Horse Milk warm.

For the Canker.

TAKE the Juice of Plantain with equal Quantity of strong Vinegar; add to them the same Weight of Roach Allom powdered, and with this Mixture wash the Sore two or three Times a Day; this will still be much better if we put a little of a Decoction of the inward Rind of the Elm Tree to it.

For

For the Dropsie, from Mr. Dixon.

TAKE a Gallon of old strong Beer, and set it on the Fire, skim off the Froth as it rises; then take a Handfull of Wormwood with the Stalks, and put it in the Beer, to boil to a Quart; take it from the Fire and strain it, and dissolve in it three Ounces of Treacle, and add one Ounce and half of long Pepper and Grains, finely pulverised: Mix these well till the Composition is Milk warm, and give him a Dose.

The next Day let him Blood in the Neck-Vein, and anoint his fore Leggs with train Oil, and turn him into good Grass.

The Hempseed Purge.

THE Flower of Hempseed clean drest, being mingled with the Horse's Oats, is very gentle in its Operation, and without Offence to the Stomach; it is a soft Purge and the best to begin withall, for it neither offends the Horse in Taste, nor works upon him in any way, nor upon any Humour, but what Nature is willing to expell; its Office is only to purge the Stomach and Bowels.

For

*For a Boil, Botch, or Impostumation; from Mr.
Miller of Northamptonshire.*

TAKE Southernwood, dry it and beat it to Powder, and with Barley Meal and the Yolk of an Egg, make it into a Salve; this Charge lay on the Swelling, and it will ripen it, break it, and heal it.

For the Pole Evil; from M. Munfey Esq;

TAKE common Loam, but rather the Loam from a cobb Wall without Lime the Straws and all, and boiling it in strong Vinegar, apply it Plaister-wise to the Sore, and it will search the Wound to the bottom, and heal it; but if you observe any dead or proud Flesh about the Wound, either cat it off with Vitriol, or cut it away.

*For the Pinn or Webb in a Horse's Eye; from Mr.
R. S. in Norwich.*

TAKE the Juice of Betony, and wash his Eyes with it, and it will wear the Spots away.

*For the watry Eye, or Blood shotten Eye, from Mr.
L. S. in Essex.*

TAKE of the fresh Tops of Wormwood, one Handfull, and beat it in a Mortar with the Gall
of

of an Oxe; strain it, and anoint the Horse's Eyes with it twice a Day; it is an approved Remedy.

Of the Colt Evil, or Shedding of the Seed.

FOR the Colt Evil, take the Powder of Anni-seeds and the Leaves of Betony, equally proportioned; stamp them with white Wine, till they come to a thin Paste; with which Mixture annoint the Sore, and it will cure that Imperfection in the Yard.

BUT if the Horse shed his Seed, then take Venice Turpentine and Sugar mixed together, and give him every Morning a Ball untill the Flux is stopt; if you add a little of the inner Bark of Oak tis very good, or the Powder of an Acorn is still better. This Distemper happens commonly in *August*, and such verry hott Weather in *May*.

Of the Lampas and its Cure.

PUT a Piece of Wood as large as a rouling Pin between the Horse's Chops, and then with a crooked Iron burn away all the superfluous Flesh, and annoint the sore Place with Salt, or with Salt and Honey.

For

*For the Bladders in a Horse's Mouth; from Mr.
T. G. of Exeter.*

THE Cure is, to open them with a Lancet, and then pressing out the Corruption, wash the fore Place three or four times a Day with warm Alum water, in which some red Sage and a little Honey has been boiled.

*Of the Bloody Rists in the Palate of the Mouth;
from a Gentleman of Northamptonshire.*

FIRST wash the fore Place with Vinegar and Salt, till it be raw; then take Honey well mixt with the Powder of Jett, and rub it upon the Sore, and it will soon heal it, or else boil a Handfull of the inward Bark of Elm, in a Pint and an half of spring Water, till it comes to half the Quantity, adding then a little Honey to the Decoction; and use it warm twice or thrice a Day.

To cure the Chords in a Horse. For the Chords, use the following Method.

TAKE of Diapentle, half an Ounce; Powder of Anniseeds, one Ounce; Saffron powdered, half a Dram; Honey, an Ounce and half; fresh Butter, two Ounces; strong Beer, one Pint and half; the sharpest Vinegar half a Pint; heat these and mix them over the Fire, till the Butter and Honey are

are melted ; then take the Mixture and give it the Horse Milk warm Fasting.

AFTER which, walk him till he is warm ; then set him up, and tye him upon the *Bitt* five or six Hours ; clothe and litter him up warm, and after that give him a little Hay, and then a Mash, but no Water of any Sort that Night.

THE next Day in the Morning give him another Mash, and about Nine or Ten a-Clock warm Water and Bran ; and continue this Practice for four or five Days. Then cut him ; and in that Operation, observe that he must be cut at the very bottom of the Breast, where you see the Vein ; under which Vein lies the great Sinew. When you see where the Vein lies, draw the Skin aside which lies over the Vein, and cut that Part of the Skin an Inch or more just upon the Vein ; then with your Cornet-horn-Point make a little way, and you will see a blue Film lye over the Vein ; chafe that with your Cornet to Pieces, till you come to see the clear Vein, and then with your Cornet-horn draw the Vein aside with one Hand, and put the Point of your Cornet under the Sinew, and with it raise the Sinew above the Skin, cutting it Immediately quite asunder, and then let it go.

THEN put a little Butter and Salt into the Wound, and heal it up with common Turpentine and Tallow mixt together.

WALK

WALK then the Horſe an Hour at a Time twice a Day for five or ſix Days, and if you find that, with the firſt Drink, the Cold breaks at his Noſtrils, then give him the ſame Drink again at three or four Days Diſtance between each Drink, and order him as directed at firſt.

To make Diapente.

TAKE the Roots of both Ariſtolochia's, fine Myrrh, Bay-Berries, Shavings of Ivory or Harts-Horn, and the Roots of Gentian, of each four Ounces; when they have been gently dried, make them into a fine Powder, which muſt be kept in a Glaſs-Bottle and a dry Place.

For a Surfeit in a Horſe.

TAKE of the aforeſaid Diapente, three Quarters of an Ounce; put it into a Quart of ſtrong Beer, and add of London Treacle half an Ounce, of freſh Butter a Quarter of a Pound; make it Hot enough to melt the Butter, and give it Milk warm to the Horſe.

For a Horſe that hath taken a Purge, which does not work.

TAKE about a Quart of Ale-wort, or Ale free from the Yeſt, and put to it half an Ounce of Annifeeds finely powdered, and of Liquoriſh as much,

much, with Treacle and Butter four Ounces each; give this to the Horse Milk warm.

For a Horse that has Worms.

TAKE of Aloe Hepatica well pulverised, about five Drams, and make it into Pills with fresh Butter; give these to the Horse in Ale-wort, to every Pill a Horn full of Wort; there should be three Pills.

For a Strain.

TAKE of Hogs-Lard, Nerve-Oil, Bole-Armoniack, and Castile-Soap, of each one Pound; boil them well together, keeping them stirring till the Composition is cold; keep it in a Pipkin for your Use, and when you have occasion, anoint the place affected with this Unguent warm, rubbing it well in.

Of Pissing Blood, and the Remedy.

THIS Distemper comes from some Strain; whenever we find it, Bleed the Horse and give him some of the Styptick Liquor which I have mentioned to be had at Mr. Pingo's, in New-street, Shoe-Lane, about a large Spoonful in a Pint of Warm strong Beer, which will bring him to Order.

For

For the Laxe, or Flux in Horses.

TAKE half a Dram of Pome-granate Shells well dried and Powdered; boil this in a Quart of strong Beer, with half an Ounce of Dill-feed, or Fennel-feed, and as much Fenugreek-feed, and give it the Horse warm.

Or else, if Pome-granate Shells cannot be had, boil instead of them one Handful of the Plant called Shepherd's Purse, and give the Drink to the Horse Milk-warm.

For Bots and Worms of all Sorts.

TAKE the Leaves of Savin, and mix them well with Honey and fresh Butter; and making two or three Pills or Balls of this Mass, give them the Horse, with a Horn of strong Beer after each Ball.

For a Pain in the Kidneys, or the Stone.

TAKE a Handfull of Maidenhair, and steep it for twelve Hours in a Quart of strong Beer, and give it the Horse to drink every Morning, till he is well; adding to every Draught about ten Drops of Spirit of Turpentine.

For a Strain in the Coffin Joynt.

TAKE Hogs-Lard, Castile-Soap, and Bole-Armoniac pulverised, add also Nerve-Oil, each in equal Proportions; boil them together, and keep them stirring whilst on the Fire; then put the Mixture in a Gally-pot for Use; and when you use it, rub it in well with your Hand, and then pass a hot Iron over it, which repeat once a Day, till the Horse is well.

A Charge for the same.

TAKE of black Pitch, Burgundy Pitch, and common Turpentine, of each four Ounces; melt them together, and when they are well mixed, lay on the Charge or Salve round the Joynt, as hot as the Horse can well bear it; cover it immediately with Flocks, and when that comes off, lay on another Charge if there is Occasion.

To cure the Spleen in Horses.

TAKE Agrimony, and boil one Handful of it in the Water which the Horse is to drink Mornings and Evenings, chopping the Leaves small when they are boiled, and then mix them well with fresh Butter, to be made into Balls, of which give to the Horse two or three at a Time, in the Manner of Pills, with an Horn of old strong Beer after each Ball.

Ordering of Mares after Foaling.

As soon as your Mare hath foaled, you shall remove her into the best Grass you have, which is fresh and unfoiled, to make her Milk spring; and if it be early in the Year, take care that there be good Shelter for her, and let her Colt run with her, most Part of the Summer following.

For a Mare after Foaling, when she has a Difficulty of Cleaning.

If your Mare has been difficult in Foaling, or cannot cleanse after she has foaled, take a Quart of old strong Beer, and boil in it an Handfull of Fennel, with a fourth Part of the best Oil-Oilve, and mix them well together. Give this to the Mare Milk-warm, by pouring it into her Nostrils, and holding them up and stopping them close till she strain her whole Body, and it will presently give her Ease.

Ordering of a Colt after Weaning, from Mr. Thornton.

WHEN you intend to wean your Foals, you shall take them from their Dams over Night, and drive them into some empty House where they may rest, and the Mares be free from their Noise.

ON

ON the Morning following, give to every Foal fasting, a Sprig or two of Savin rolled in Butter, and let him fast for two Hours; then give him a little Meat, as Grass, Hay, or Chaff, with some clear Water, and repeat this Management three Days successively; when they will have forgot their Dam: Then geld such Colt Foals as you intend to make Geldings of, and after their swellings are past, put them with your other Colt-Foals into a Pasture by themselves, and your Fillys into another by themselves. These Pastures should be spacious Pieces of Ground, where they may run till they are ready for the Saddle.

To Provoke Lust in Mares.

IF you have any particular Opportunity of a fine Stallion, when your Mare is not naturally disposed to receive him, or will not stand to be covered; In this Case to Provoke Lust in her, give her Drink of clarified Honey and new Milk mixt together, and then with a Bush of Nettles patt her hinder Parts, and immediately after offer her the Horse, which she will receive.

For the Dropsie in a Horse.

TAKE a Handful of Wormwood, and boil it in a Quart of old strong Beer, with an Ounce of Juniper Berries well dried; give this to the Horse to drink luke-warm Morning and Evening, and treat

him with warm Water, with a little Bran in it, at the watering Times, which should be about three Hours after he has taken the Medicine.

For the Cholick, or Belly bound.

TAKE of Dill or Fennel an Handfull, or in the Room of the Herbs, take an Ounce of the Seeds of either of them, with a Quart of Malt fresh Ground, and boil them in the Water you give your Horse to drink: But if he cannot dung, then you shall boil in his Water one Handful of Fenugreek, and it will loosen his Body and bring him to order.

A certain Cure for the Gripes in Horses, from Captain Ferrers, of Bruxelles.

As soon as you perceive an Horse to have the Gripes, fill a Pipe with Tobacco, having first glazed the Stem of the Pipe with Sealing Wax, for four or five Inches, and take care it be short, and as strong as possible. When the Pipe is lighted, put the glazed Part of the Stem two or three Inches into the Horse's Fundament; and in a short Space the Tobacco will be Smoaked out, and the Horse as soon relieved. Take care at the Drawing out the Pipe, that the Stem be not broke.

THE

THE Gentleman who taught me this, has tryed it several Times in the Army where he learned it, and I have proved it three or four Times.

BUT as it would be dangerous to break a Pipe in a Horſe's Fundament, ſo he contrived to have a Stem for a Pipe made of Ivory on Purpoſe.

Of Diſeaſes in Horſes Ears; and firſt of the Lave Ears, or hanging Ears, from Mr. M. J.

THE Hanging of the Ears, is called by ſome the *Lavecard*; and although it is not any Pain to the Horſe, yet it is a Diſgrace to him in his Appearance, and ſo diſagreeable to every Beholder, that it even hides and obſcures all other Virtues. It is an Infirmary proceeding from Nature: And although few of our Farriers either have endeavour- ed or know how to help it, yet ſuch has been the Care of others to know the true Cauſe of it, that by trying many Concluſions, in the end they have hit upon a certain Cure, and have lately helpt many Horſes in that Condition. The Cure is this; Take your Horſe's Ears and place them in ſuch a Manner as you would deſire they ſhould ſtand, and then with two little Boards three Fingers broad, having long Strings knit to them, bind the Ears ſo faſt in the Places wherein they ſtand, that by no Means or Motion they may ſtir.

BETWIXT the Head and the Root of the Ear, you will discover a great deal of wrinkled, empty Skin, which with your Finger and Thumb you must lift up, and then with a very sharp Pair of Sizars clip away all the thin Skin close to the Head; after which with a Needle and Silk, you must stitch the two Edges of the Skin close together, and then with a Salve made of Turpentine, Bees Wax, Deers Suet, and Honey, of each a like Quantity, melted together, heal up the Sore: Which done, take away the Splents which supported the Ears, and his Ears will keep upright, and in the same Place as you set them.

Of the Distempers of the Eyes, and principally the Waterish or weeping Eyes.

WATERISH Eyes proceed either from Rhumatick and moist Humours, or from some Stroke or Blow, either with a Rod, Whip, or such Like; and the Cure is,

FIRST let him Blood in the Eye Vein; then take Pitch, Mastick, Rosin, of each like Quantity, and melting them together, spread it with a Stick over his Temples; then lay over that some Wool so as to lye flat to his Head.

EACH Morning wash his Eyes with white Wine, wherein has been dissolved a little Alum, or blow into them some Powder of Tutty; or you may mix

mix the Tutty with fine Honey, and touch the Corner of the Eye with it, and you will find that as the Humour decreases, so the Plaister will loosen and fall.

Of the Canker, Ulcer, and Fistula in the Eye.

THIS Disease proceeds from the Corruption of the Blood, and salt Humours, descending from the Head into the Eyes. The Signes are, the White of the Eye will be full of red and bloody Streaks, and upon the Eye-Lids will appear little angry, red, Pimples, from whence will run a sharp Water, which will scald the Cheek as it passes, and the Eye it self will be full of Gum, and corrupt yellow Mater. The Cure is, first, to let him Blood on that Side of the Neck, on which is the sore Eye; and then with a very small Instrument of Steel or Silver, you must search all the Pimples, to see if you can find any Hole or Hollownes amongst them, and if you find any, you must search their Depth: Make then a Tent fit for the Hole, and dip it in the Water prepared with Copperas of the white Sort, directed under the Title of Copperas-Water, and so put it into the Hole every other Day, making the Tent shorter by degrees, till the Hollownes be filled; but if you find no Hollownes, then twice a Day rub the Pimples with this Water till they are bloody, and it will cure the Eye,

To bring away the Glanders, when they are brought to Suppuration.

TAKE strong White-wine Vinegar, put into it three whole Eggs, and let them lye 24 Hours; then beat the Eggs well together, and give it the Horse. You may repeat this two or three Mornings, more or less, as you find Occasion.

Of the Apoplexy and Palsey, with the Cure.

THE Apoplexy differs but little in outward Appearance from the Falling-Evil, for it is a Depriving of the whole Body of Sense and Motion; but if it deprive only Part of the Body, or but one Member, then it is called a Palsey. It differeth from the Falling-Evil only in this, *viz.* that the Falling-Evil is a Disease proceeding generally from the Disorder of the whole Body, this only from the Distemperature of the Brain. For my own part, I have never seen this Apoplexy in Horses, nor do I hold it a Disease common to the Horse. I suppose, however, that those Farriers who make the above Distinction between the Apoplexy and Palsey, only do it from the Palsey's appearing more violent at one time than another, or in one Horse more than another; which may have occasioned new Names of the Diseases: as when a Horse having only the Staggers, hath fallen down, and has lain for a little space as if he had been dead, they have presently conjectured it to be the falling
Sickness

Sickness or Apoplexy, which Titles one may with as much reason give the Staggers.

As for the Palsey, I have often seen it in Horses, chiefly among hunting Horses in their first training, or to such Horses that come, after tender Keeping, to take sudden Heats and Colds in Hunting. The Signs are, that they will hold their Necks awry, trip, and go sideways in a reeling Manner, their Legs will be feeble and their Head painfull, which they will shew by the shaking of them; yet notwithstanding, they will eat their Meat with good Appetite.

The Cure is, first to anoint them all over their Bodies, with the Oil Petroleum, or Oil of *English* Pitch, which I have already mentioned, may be had in great Purity, at Mr. *Pingo's* *Chymist*, in *New-street, Shoe-Lane*; then bind the Neck straight with Splents of Wood, and making his Stable very warm, give him the following Drink, *viz.*

TAKE half an Ounce of long Pepper finely powdered; of Cedar-wood, two Ounces; of Niter, an Ounce; of *Assa Foetida*, the Quantity of a Bean, or in lieu of that, five or Six cloves of Garlick: After the Ingredients have been infused in a Quart of White-wine or old strong Beer, till the Liquor is strong of them, strain the Liquor off, and give it at two Mornings Milk-warm.

DURING

DURING this Illness, give him warm Mashcs, and a little Antimony in his Meat.

Of Cramps or Convulsions of the Sinews or Muscles.

CRAMPS or Convulsions of the Sinews, are violent Contractions or Drawings together of Members, either throughout the whole Body, or particularly in one Member; they proceed either from Causes natural, or Causes accidental: If from natural Causes, they either come from too great Fullness or Emptiness.

WHEN from Fullness, they proceed from a Surfeit of Meat or Drink, or the Want of proper Vacation; when from Emptiness, they come from too much Blood-letting, or too much Purging, or too much Labouring; all which fill the Hollowness of the Sinews with cold windy Vapours, which are the only great Causes of Convulsions. If they come from Causes accidental; then it is from some received Wound, where a Sinew is but half cut asunder, or only prickd, which presently cause a Convulsion over the whole Body. The Signs of the Disease are, the Horse will carry his Neck stiff and not be able to stirr it; his Back will rise up like the Back of a Camel, or like a bent Bow; his Crupper will shrink inward, his fore Legs will stand close together, and his Belly will be clung up to his Backbone;

bone; when he lies down he is not able to rise, especially from the Weakness in his hinder Limbs.

THIS Disease, is frequent among Horses, and the Cure is this.

FIRST sweat him, either by Burying him all save the Head in a Dung-hill, or else by applying hot Blankets doubled about each Side of his Heart and Body; then after his Sweat anoint all his Body over with Oil of Petroleum; for it is much better than either Oil of Bay or Oil of Cypress.

THEN give him to drink the following Liquor, *viz.* Take one Dram of Assa-foetida, with Anni-seeds, Seeds of Fenugreek, and Cummin Seeds, of each half an Ounce; put these into a Quart of strong white Wine, and add to the Composition three or four large Spoonfulls of Oil-Olive, keeping him warm after the Drink, and feeding him with good bean Bread and warm Mashies, made of ground Malt and warm Water, and his Sinews will soon come to their former Ability.

BUT if the Convulsion came accidentally, as by the Prick or half Cut of a Sinew, then search for the wounded Sinew, and with a Pair of Sheers clip it asunder, and the Convulsion will cease. But if it be a Cramp only, and so but in one Member; then if you do but chafe or rub the grieved Part, with a hard Wisp or a Hay-Rope; the Pain will Cease.

To carry off the Glanders, from Mr. Saunders of York.

TAKE one Quart of strong white Wine, or for Want of that, as much old strong Beer; to which put Figs, cut small four Ounces, and two Ounces of Liquorice sliced; boil them well together, and then add Flower of Ginger, a Dram; with Elecampane and Pepper, powdered, of each the same Quantity: When these are well boiled together, put in of Treacle, four Ounces, and of Butter the same Quantity, with the Yolks of two new laid Eggs, mixt well in the Liquor; give this to the Horse Milk-warm, and keep him from Cold.

For a Strain in the Back Sinew.

TAKE of Venice Turpentine, one Ounce, with three Spoonfuls of Brandy or Spirits of Wine; stir them well together, and rub the strained part well with it; warming first the Composition with a Chaffing-dish of Coals; repeat this every 24 Hours for three or four Days successively. Oil of Turpentine is good alone, if the Venice Turpentine cannot be had.

A certain Remedy for the Grease in Horses, communicated by Mr. R. Dyer.

TAKE of Antimony, Gum Guaiacum, Fenugreek Seeds, and Parsley Seeds, of each four Ounces;

Ounces; let all these be finely powdered, and mixt with as much common Treacle as is necessary to make a Paste or Mass.

GIVE the Horse the Quantity of an Hen's Egg every other Morning, exercising him well after he has taken the Balls, and giving him warm Water those Days he takes them.

Of Heat in an Horse's Mouth, and its Cure.

BLEED the Horse in the Roof of his Mouth, and when he has champed upon his Blood for six or seven Minutes, then wash his Mouth and Tongue with strong Vinegar and Salt; after which rub it with Syrup of Blackberries or Mulberries.

THIS may be repeated two or three Days successively, two or three Times each Day.

Of the Impostume in the Eare, from Mr. S. Mitchell.

TAKE one Handfull of Sorrel, and wrap it in a Bur-dock Leaf, let this roast in hot Embers, till the Sorrel is softened; apply this as hot as possible to the Impostumated Part, which is within the Ear; shifting it every Day till it hath ripened and broke it.

BUT if Sorrel or Bur-dock-leaves cannot be had, take the Yolk of an Egg, Wheat Flower, Honey, and

and the green Tops of Rhue bruised and mixt, it will have the same Effect as the above; then you may heal the Sore with Salve made of Turpentine, Bees-Wax, Honey, and Deer or Mutton Suet.

If your Horse has a Pain in his Ear without any Swelling; then only stop his Ear with black Wool dipt in Oil of Camomile, and it will soon relieve him.

A Drench for an Horse that is feeble and faint, and frequently attended with a Coldness or Shivering; from the Reverend Mr. J. Griffith.

TAKE the Leaves of Cowslips, Hyfop, Harts-tongue, and Liver-wort, of each an Handful chopt small; add to these the Roots of Birthwort, Gentian, and Elecampane dried, to which put some long Pepper, so that when they are beaten and powdered, there may be an equal Quantity of each; *i. e.* as much of each Sort as may fill a common Spoon: mix these well together, and put to them an Ounce or two of common Treacle, or else a Spoonful of Honey.

BOIL all these together in a Quart of strong Beer, till the Liquor is reduced to a Pint; then strain it, and give it the Horse Milk-warm.

THIS Drink, as it will make the Horse dry, will perhaps make him lose his Appetite to eat; but if you perceive this, give him a Warm *Mash*.

WE may repeat the Drench two or three Times, resting three Days between each Time, and must keep the Horse in a warm Stable on the Days he has taken the Drench.

Remarks on the Barbs in Horses, which are by some called Papps under the Horse's Tongue; in a Letter from Captain Brancor of Newcastle upon Tine.

‘ THE Barbs under Horses Tongues have been
 ‘ supposed by some to be a Kind of Distemper
 ‘ in Horses, which therefore has occasioned many
 ‘ People to take them off, when they have ap-
 ‘ peared a little larger than ordinary: But there is
 ‘ hardly any Horse that does not shew the Rudi-
 ‘ ments of these; for in the great Numbers, I
 ‘ have examined, I have seen them of different
 ‘ Magnitudes, seldom agreeing in their Size.

‘ WHEN they are very small our Farriers do
 ‘ not mind them; but when they appear a little
 ‘ beyond the common Size, then forsooth they
 ‘ must be cut immediately, and without extraor-
 ‘ dinary Stipticks the great Effusion of Blood can
 ‘ hardly be stopped.

‘ WOULD

‘ WOULD it not, do you think, be contrary to
 ‘ Reason, if because one could find some Mem-
 ‘ ber or Principal part larger in one Body than in
 ‘ another, that the larger should be cut off? Sure-
 ‘ ly it is not agreeable to Reason; for what Na-
 ‘ ture allows of in the Framing of Animals is
 ‘ generally good, some few exceptions excepted
 ‘ when Monsters are produced; but Monsters
 ‘ seem to be the effect of Accident and the Voice
 ‘ of the World bids us destroy them.

‘ HOWEVER if the Barbs I speak off, must
 ‘ still be cut away, let it not be done with Scif-
 ‘ fars or Sheers, as some will do it; but with a
 ‘ small pair of Mallets take hold of the Barb, and
 ‘ Burn or Seare it off with a fine small Iron.

N. B. *The Oil of Bitter Almonds is recommend-
 ed to heal the Wounds, which should be anointed
 with it frequently, till they are whole.*

The Conclusion.

I CONCLUDE, with acquainting my Readers,
 that I have mentioned in this Work, all that I
 could recollect for the Improvement of Cattle,
 which is the Design of it; and I am certain, that
 whatever is found in it will prove beneficial to
 Mankind, if the Rules laid down are practised
 by Men of Judgement.

F I N I S.







Bradley, Richard,

The Gentleman and Farne's Guide For the Increase and Improvement of Cattle,
Viz. Lambs, Sheep, Hogs, Calves, Cows, Oxen Also the best Manner of
Breeding, and Breaking Horses, Both for Sport and Burden:

London 1732

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